

From: (b) (6)
To: AskOE
Subject: FirstEnergy Request for Emergency Order
Date: Sunday, April 15, 2018 5:15:51 PM
Attachments: [Attachment 1 - Stephen Huntoon Comments in FERC RM18-1-000.pdf](#)
[Attachment 2 - Comments of Bipartisan Former FERC Commissioners in RM18-1-000.pdf](#)
[Attachment 3 - Comments of PJM Interconnection in RM18-1-000.pdf](#)
[Attachment 4 - FERC Order on Secretary's Proposal.pdf](#)
[Attachment 5 - White House and DOE Agree Evidence Does Not Warrant Use of Section 202\(c\).pdf](#)
[Attachment 6 - Coal CEO Says Bailout No Longer Needed - WSJ - 4-13-2018 - page B5.pdf](#)
[Attachment 7 - Utility Says Power Plants Will Stay Open During Bankruptcy - Ohio News - US News.pdf](#)
[Attachment 8 - FirstEnergy Solutions bankruptcy could take years; consumer impact review begins.pdf](#)
[Attachment 9 - Generator Deactivation Notices in PJM.xlsx](#)
[Attachment 10 - U.S. Coal Mogul Murray Wants to Run Power Plants Too - Bloomberg.pdf](#)
[Attachment 11 - AFP Ohio Answers.pdf](#)

Dear Secretary of Energy and Department of Energy,

I respectfully submit these comments urging the Secretary and Department to deny the FirstEnergy petition.

Key Considerations Established in My Attached Comments

The FirstEnergy request is substantively similar to the Secretary's proposal to the independent Federal Energy Regulatory Commission (except the FirstEnergy request is limited to PJM Interconnection, L.L.C., for no apparent reason other than FirstEnergy's plants happen to be in PJM). My comments (Attachment 1) to the FERC are relevant to the FirstEnergy request, and those comments established among other things:

- The Secretary's proposal would potentially subsidize tens of gigawatts of uneconomic plants, and cost consumers many tens of billions of dollars a year.
- These subsidies would crash market prices and force economic plants on to federal subsidies as well, thus ending the organized markets.
- Retiring plants have three times the forced outage rate of the new plants that the Secretary's proposal would forestall. Thus, the proposal would undermine grid reliability.
- Natural gas supply was not the major problem in the Polar Vortex as PJM data and testimony demonstrate.
- A 90-day (or 25-day) fuel supply requirement has no rational basis. In the Polar Vortex, for example, PJM generation emergencies aggregated 20 hours – less than two days.
- Following the Polar Vortex, PJM strengthened its capacity market to reward performance and penalize nonperformance and has not had a single system generation emergency in more than three years.
- The chance of a generation deficiency in PJM is much less than 1 in 5,000, based on data compiled by ReliabilityFirst Corporation, the regional entity responsible for overseeing PJM reliability.
- If that less than 1 in 5,000 deficiency were to occur it is unlikely to be due to a fuel supply emergency, as Rhodium Group data demonstrate, and unlikely to result in a customer outage due to system reliability tools at PJM's disposal.
- If the FERC were to go forward with subsidizing certain resources for an unimportant quality like fuel supply on site, it should recognize important qualities like environmental/public health damage. Because coal generation causes environmental/public health damage averaging \$32/MWh according to the National Research Council, coal plants would be assessed \$32/MWh for their generation, subtracted from whatever revenues they otherwise receive.

Comments of Former FERC Chairs and Commissioners

In the FERC proceeding a bipartisan group of former FERC Chairs and Commissioners, appointed by every President since Ronald Reagan, submitted comments (Attachment 2) opposing the Secretary's proposal, saying in summary:

The published proposal in this Docket would be a significant step backward from the Commission's long and bipartisan evolution to transparent, open, competitive wholesale markets. Pursuing the worthy goal of a resilient power system, the Commission's adoption of the published proposal would instead disrupt decades of substantial investment made in the modern electric power system, raise costs for customers, and do so in a manner directly counter to the Commission's long experience.

Comments of PJM

As the Secretary and Department are aware, PJM is the independent regional transmission organization responsible for operating and planning a reliable grid across 13 states and the District of Columbia. PJM submitted extensive comments (Attachment 3) stating as relevant here (page 14):

The evidence and events that the DOE NOPR cites do not support its assertion of a resilience crisis or its rationale for degrading competitive markets in the name of fuel resilience. As experience during extreme weather events has shown, myriad factors contribute to outages, and fuel security, while beneficial, provides no guarantee of resilience during such events. Given the paucity of evidence to support its expensive and anticompetitive cost of service guarantee, the DOE NOPR appears aimed less at truly addressing resilience concerns and more at benefitting certain preferred generators and fuels and the industries they support. ... the DOE NOPR offers nothing to show that market regions in general, or the PJM Region in particular, is in any danger of failing to meet reliability or resource adequacy requirements now or in the future. This is not surprising, as the PJM Region unquestionably is reliable, and its competitive markets have for years secured commitments from capacity resources that well exceed the target reserve margin established to meet NERC requirements. And the PJM capacity market also includes rigorous performance requirements, enforced by market mechanisms—which were affirmed just this year by a U.S. Court of Appeals.

FERC Order

As the Secretary and Department are aware, the independent FERC is the federal agency responsible for grid reliability and for just and reasonable wholesale rates. Four of the five sitting Commissioners were appointed by President Trump.

FERC unanimously rejected the Secretary's proposal (Attachment 4), stating: "... the extensive comments submitted by the RTOs/ISOs do not point to any past or planned generator retirements that may be a threat to grid resilience." (paragraph 15).

Specifics on the Emergency Claim

As the Secretary and Department are aware, there is a very high bar for exercise of emergency authority under Section 202(c) of the Federal Power Act.

The White House and the Department determined last year that the evidence did not warrant use of this emergency authority, stating (Attachment 5):

We look at the facts of each issue and consider the authorities we have to address them, but with respect to this particular case at this particular time, the White House and the Department of Energy are in agreement that the evidence does not warrant the use of this emergency authority.

There has been no material change in circumstances since the White House and Department

determined that use of emergency authority was not warranted.

Indeed, Robert Murray, CEO of Murray Coal, the co-advocate with FirstEnergy at the FERC and elsewhere, now states per the attached article (Attachment 6) that there is no need for a bailout. The FERC, PJM, and countless industry analysts have said that there is no emergency. As PJM discussed in its comments it has commitments for generation resources for more than three years ahead that are much greater than forecasted peak demand. And additional efficient, reliable resources are being added every year.

Moreover, subsequent to its filing with the Secretary and Department, FirstEnergy informed the bankruptcy court that all of its nuclear and coal plants will continue operating during its bankruptcy proceeding, as reported in the attached article (Attachment 7): "Attorneys for FirstEnergy Solutions say the company's coal and nuclear power plants will keep producing electricity while the company undergoes reorganization under bankruptcy."

That bankruptcy proceeding will take years, as reported in the attached article (Attachment 8). A local bankruptcy expert is quoted as saying "'It can take, on the short end, five or six years [to resolve]. I would think it can take longer than that'" said Joseph Ferrise, staff attorney for the downtown Akron office of the Chapter 13 trustee, who oversees local individual bankruptcy cases." Thus, the FirstEnergy plants will not be retiring for the foreseeable future.

Contrary to FirstEnergy's claim that there is a rising tide of coal and nuclear retirements, there have been relatively few deactivation (retirement) requests recently submitted to PJM – other than by FirstEnergy (Attachment 9). And, as noted above, notwithstanding those deactivation notices submitted by FirstEnergy, none of the FirstEnergy plants will actually be retiring for the foreseeable future.

In addition, Mr. Murray states (Attachment 10) that he is looking to buy FirstEnergy plants which he says he can operate better than FirstEnergy. Mr. Murray's comments support the propositions that (1) there are buyers for these plants and (2) FirstEnergy's problems are of its own making.

Any Emergency Would Be a National Emergency

If the Secretary and Department find there is an emergency in PJM, which has commitments for ample generation resources more than three years into the future, then there must be emergencies in all the other organized markets. And there may be emergencies in the rest of the United States, wherever state regulators have not mandated the quantity and mix of generation resources that the Secretary and Department deem necessary for non-emergency conditions. As the Secretary and Department are aware, many coal plants have retired outside of the organized markets and continue to do so.

Consequently, if the Secretary and Department were to find there is an emergency in PJM it would be imprudent for the Secretary and Department to exclude any part of the United States from an emergency order. In addition, the Secretary and Department should request Congress to pass legislation on an emergency basis to extend the jurisdiction of Section 202(c) to Texas, Hawaii and Alaska so that the emergency order can apply to those states as well.

Selection of, and Compensation for, Coal and Nuclear Plants

If, against facts and law, the Secretary and Department determine to exercise emergency authority it would present the question of selecting and compensating the plants to be subsidized.

Section 202(c) is part of the Federal Power Act, which states in Section 205(a) that "All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or

charge that is not just and reasonable is hereby declared to be unlawful.”

There is no exception for emergency orders under Section 202(c) which itself says that the terms, including compensation, shall be “just and reasonable.” “Just and reasonable” has been interpreted for decades as meaning the lower reasonable cost consistent with the maintenance of adequate service.

It would be unjust and unreasonable to compensate any coal and/or nuclear plants beyond the minimum amount of capacity deemed necessary to alleviate the purported emergency, and it would be unjust and unreasonable to provide compensation beyond that necessary to keep that minimum amount of capacity from retiring. To ensure the lowest reasonable cost that minimum amount of capacity should be acquired in a competitive auction among entities that PJM and the PJM Market Monitor determine would otherwise retire absent subsidy. An auction also ensures that to the extent an entity is erroneously deemed eligible it would tend to bid low for subsidies.

As for FirstEnergy in particular, it was paid \$6.9 billion in “stranded costs” by consumers in return for transitioning to a competitive market, as reported in the attached Q&A by the utility AEP Ohio (Attachment 11). It would be an unjust and unreasonable windfall for FirstEnergy to keep the stranded cost payments and get paid again with out-of-market subsidies. Therefore, to the extent FirstEnergy plants elect to offer their capacity for potential subsidy, it should be a condition of their eligibility that stranded cost payments of \$6.9 billion (plus interest) be deducted from what FirstEnergy would otherwise be paid. When consumers have been fully reimbursed for their stranded cost payments FirstEnergy plants could begin receiving auction revenue.

Thank you for your consideration of these comments.

Respectfully submitted,

Stephen L. Huntoon

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**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid Reliability and Resilience Pricing

)

Docket No. RM18-1-000

**COMMENTS OF
STEPHEN L. HUNTOON**

Pursuant to the *Federal Register* notice of proposed rulemaking published by the Commission on October 10, 2017, the undersigned hereby respectfully submits these comments on the U.S. Department of Energy proposal (DOE proposal) in this proceeding.

I have practiced energy regulatory law for 35 years, served as a former President of the Energy Bar Association, and been involved in most of the major regulatory initiatives of the Commission involving the electric industry. A short biography is provided in Attachment A.

I have written three columns on the DOE proposal which have been published in *RTO Insider*. These columns are provided in Attachment B and are incorporated herein by reference.

Some key points from those columns:

- The DOE proposal would potentially subsidize tens of gigawatts of uneconomic plants, and cost consumers many tens of billions of dollars a year.
- These subsidies would crash market prices and force economic plants on to federal subsidies as well, thus ending the organized markets.
- Retiring plants have three times the forced outage rate of the new plants that the DOE proposal would forestall. Thus, the DOE proposal would undermine grid reliability.
- Natural gas supply was not the major problem in the Polar Vortex as PJM data and testimony demonstrate.

- A 90-day fuel supply requirement has no rational basis. In the Polar Vortex, for example, PJM generation emergencies aggregated 20 hours – less than two days.
- Following the Polar Vortex, PJM strengthened its capacity market to reward performance and penalize nonperformance and has not had a single system generation emergency in more than three years.
- The chance of a generation deficiency in PJM is much less than 1 in 5,000, based on data compiled by ReliabilityFirst Corporation, the regional entity responsible for overseeing PJM reliability.
- If that less than 1 in 5,000 deficiency were to occur it is unlikely to be due to a fuel supply emergency, as Rhodium Group data demonstrate, and unlikely to result in a customer outage due to system reliability tools at PJM's disposal.
- If the Commission goes forward with subsidizing certain resources for an unimportant quality like fuel supply on site, it should recognize important qualities like environmental/public health damage. Because coal generation causes environmental/public health damage averaging \$32/MWh according to the National Research Council, coal plants would be assessed \$32/MWh for their generation, subtracted from whatever revenues they otherwise receive.

For these reasons I respectfully request that the Commission not adopt the proposed rule.

Respectfully submitted,

/s/ Stephen L. Huntoon
 Stephen L. Huntoon
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October 23, 2017

Attachment A



Steve Huntoon

Steve Huntoon is the principal of Energy Counsel, LLP, www.energy-counsel.com. He is a former President of the Energy Bar Association, the bar organization of more than 2,400 energy attorneys and professionals.

Over 35 years practicing energy law, Steve has advised and represented many energy companies, including Dynegy, PECO Energy (an Exelon company), Florida Power & Light (a NextEra Energy company), ISO New England, Entergy, PacifiCorp, Williston Basin (an MDU Resources company) and PHI/Conectiv (an Exelon company).

His industry roles have included:

- reliability standard development and compliance,
- generator interconnection,
- PJM and New England energy and capacity markets,
- first commercial wind project in the eastern U.S. at Hazelton, PA, and first coastal wind project in the eastern U.S. at Atlantic City, NJ,
- retail electric and natural gas marketers, and
- restructuring of electric utilities and gas pipelines under FERC Orders 888 and 636, respectively.

Steve is a regular contributor to *RTO Insider*, tackling cutting-edge issues such as microgrids, electric cars, rooftop solar, home and grid batteries, competitive transmission, generator interconnection, grid reliability, economics of new and existing nuclear plants, transition to 100% renewable energy, LED lighting, Standard Market Design, and subsidy of coal and nuclear plants.

He received his B.A., with honors, from the University of Virginia in 1978, and his J.D. from the University of Virginia Law School in 1982. He is a member of the District of Columbia Bar.

Attachment B

COUNTERFLOW

BY STEVE HUNTOON

Cash for Clunkers Redux

By Steve Huntoon

Remember the Cash for Clunkers program? Inefficient cars paid to go away.

The Energy Department's directive to FERC last week is Cash for Clunkers with a twist: inefficient generators paid to stay.

The original Cash for Clunkers was an economic stimulus for new stuff to replace the old stuff. The DOE's Notice of Proposed Rule-making subsidizes the old stuff to stop the new stuff: a sort of stimulus in reverse. (See related story, Perry Orders FERC Rescue of Nukes, Coal, p.1.)

So we might say the DOE version is a Twisted Sister sort of twist on the original.

Bailing Out the Retiring, Retired and Canceled Clunkers, and then Everyone Else

We know with certainty that the DOE proposal subsidizes the inefficient because those are the plants that will opt for the federal rate guarantee instead of market-based rates. How will this play out?

DOE says there are 34 GW in projected retirements over the next five years. Under the DOE proposal, none of that would retire and instead would go on the federal dole.

And then there's the 71 GW that already retired over the last six years but will likely return, like "Night of the Living Dead," for that federal rate guarantee.¹

And how about all those canceled nuclear projects?

So we'll have around 100+ GW of uneconomic clunkers crashing the markets, and of course crashing market prices. This will force all the economic plants that depend on legitimate market prices to join the federal dole.

Natural gas plants will do this by simply adding 90 days worth of oil tanks.²

What will all this cost consumers? DOE doesn't even try to answer that question, but here's one way of looking at it. First, we can assume that FERC won't want thou-



Huntoon

sands of individual rate cases for all the power plants in all the RTOs.³

So FERC would need some sort of standard compensation. Let's say it adopts a cost of new generation, maybe \$400/MW-day.⁴ Generation in the RTOs is around 530 GW; add the roughly 70 GW of retired clunkers that will return from the dead, for about 600 GW on the federal dole. That's about \$88 billion annually.

So we are talking about tens of billions of dollars a year squandered first on what are, by definition, uneconomic resources, and then by paying economic resources that are rendered uneconomic by the clunkers and forced onto the same federal dole.

I can't help noting how Republicans blasted the original Cash for Clunkers,⁵ which had a one-time cost of \$3 billion. The DOE version is tens of billions of dollars every year, forever.

Resiliency

DOE says that its proposal is about "resiliency" (the new buzzword for reliability). But the retiring plants really are clunkers, as this PJM slide excerpt illustrates (I'll translate the jargon after the slide).⁶

Drop in Weighted Average EFORd Projected for 2021 is due to:

- Large amount of deactivations with high EFORd (7,150 MW with 14.56% Weighted Average EFORd).
- Large amount of additions with low EFORd (10,980 MW with 4.42% Weighted Average EFORd). Additions include only those queue projects that have executed an Interconnection Service Agreement.

| PJM

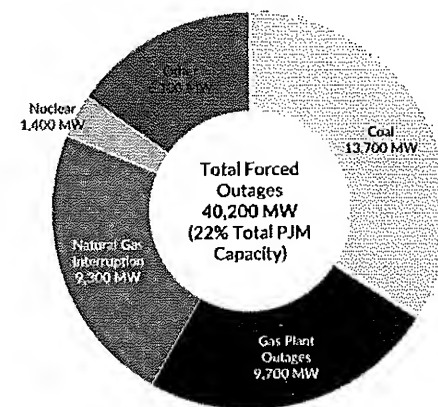
The deactivating (retiring) stuff has an outage rate — equivalent forced outage rate-demand (EFORd) — that is three times the new stuff (14.56% versus 4.42%). Yet DOE wants to subsidize these clunkers so they won't retire.

And that somehow is going to improve resiliency, again in a Twisted Sister sort of way.

90 Days of Fuel Supply on Site

A few words about the fuel supply require-

ment. DOE relies heavily on PJM's experience in the polar vortex of 2014 and claims that natural gas supply was the major problem. It was not. As this PJM chart plainly shows, natural gas interruptions affected 9,300 MW, accounting for less than 25% of total forced outages of 40,200 MW.⁷



| PJM

The FERC testimony of Mike Kormos, PJM's executive vice president at the time, directly contradicts DOE's main claim: "Natural gas interruptions removed less than 5% of the total capacity required to meet demand on Jan. 7, [2014], while equipment issues associated with both coal and natural gas units made up the far greater proportion of forced outages."⁸ (Emphasis added.)

Beyond equipment issues, another basic flaw in a metric like fuel supply on site is that coal piles freeze, as some did in the polar vortex. Years of coal supply on site would be worthless if frozen. And of course, nuclear plants can't run during refueling and other outages. Years of nuclear fuel on site would be worthless during those outages.

Here's a fun fact you won't find in the DOE NOPR: Baseload (combined cycle) natural gas plants average lower forced outage rates (4.29%) than baseload coal plants (7.71%), and have about the same as nuclear plants (3.51%).⁹ It's these overall forced outage rates that matter — not a single metric like fuel supply on site.

As for 90 days specifically, DOE provides zero rationale for that. In the polar vortex, the generation emergencies in PJM aggregated 20 hours.¹⁰ What is magic about 90 days (other than being tailored to the average coal plant stockpile)?

Continued on page 4

COUNTERFLOW

BY STEVE HUNTOON

Cash for Clunkers Redux

Continued from page 3

FERC and RTOs like PJM have learned from the polar vortex to reward performance and penalize nonperformance, instead of using a meaningless metric like days of fuel supply on site.

PJM hasn't had a single system generation emergency in more than three years — that's more than 26,280 hours of reliable operation. And PJM locks down adequate, reliable generation resources years in advance.

Bottom line: DOE proposes to take a system that is incredibly reliable and squander tens of billions of dollars on uneconomic resources to make it less reliable.

J&R Gone Missing

Absent from the DOE NOPR is an explanation of how its proposal would satisfy the lodestar requirement of the Federal Power

Act that all rates be just and reasonable.¹¹

Subsidizing uneconomic clunkers in organized markets is the antithesis of just and reasonable rates. It would be a repudiation of everything that FERC has sought to accomplish over the last 25 years.

Maybe Rick Perry was right all along: DOE should be abolished.

Steve Huntoon is a former president of the Energy Bar Association, with 30 years of experience advising and representing energy companies and institutions. He received a B.A. in economics and a J.D. from the University of Virginia. He is the principal in Energy Counsel, LLP, www.energy-counsel.com.

¹ If you're one of those owners, you might want to hold the wrecking ball. Or come to think of it, maybe you wouldn't: more rate base if you wreck and rebuild.

² The *Wall Street Journal* cites unidentified experts for the notion that on-y nuclear and coal plants will qualify under the DOE proposal. That is wrong. Installing oil storage at natural gas plants is routinely done. Of course, if rate base becomes the game, LNG tanks would be used instead.

³ PJM alone has about a thousand generating units that do or could qualify for the federal rate guarantee. <http://pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2020-2021-rpm-resource-mode.ashx?a=en>.

⁴ There's a straight-faced argument for that: If new generation investment costs that much, existing generation should be compensated at the same level. Otherwise we would be incenting existing generation to retire that would cost less to keep around than paying for replacement new generation.

⁵ <https://www.seattletimes.com/nation-world/cash-for-clunkers-in-trouble-politics-or-prudence/>. "Senate Republican leaders rallied against the program Monday, casting it a mode of government inefficiency and out-of-control spending."

⁶ <http://pjm.com/-/media/committees-groups/committees/mrc/20170928/20170928-item-07-2017-irm-study-presentation.ashx> (slide 7).

⁷ <http://pjm.com/-/media/library/reports-notices/weather-related/20140509-analysis-of-operational-events-and-market-impacts-during-the-jan-2014-coal-weather-events.ashx> (page 26).

⁸ <https://e.library.ferc.gov/idmws/common/opennat.asp?fileID=13502869>, (page 11, n. 4).

⁹ <http://www.nerc.com/pa/RAPA/gads/Pages/Reports.aspx> (click on Brochure 4 for 2012-2016 and compare EFORd (column AC) for the fuel types).

¹⁰ <http://pjm.com/-/media/committees-groups/committees/e/c/postings/performance-assessment-hours-2011-2014-x.sshx?a=en>.

¹¹ DOE gives lip service to the statutory requirement by using the term "just and reasonable" twice in its proposed regulation. It's like saying "bring me a blue rock that is red."

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COUNTERFLOW

By Steve Huntoon

Anatomy of the New Cash for Clunkers

By Steve Huntoon

Those of us who dwell in the economic/regulatory/public policy realm wonder about the origins of atrocious public policy. Where did it come from? Whose awful idea was this?

In the case of the Department of Energy's Cash for Clunkers proposal, we pretty much know.

Robert Murray, owner of the coal mining company Murray Energy,¹ was a large fundraiser for candidate Donald Trump during the campaign.² After the election, Murray had a couple of meetings with President Trump at which the president promised Murray to do whatever he (and FirstEnergy) wanted Trump to do. I'm not making this up.³ (See excerpt, right.)

What Murray wanted was for Rick Perry, the secretary of energy, to declare an emergency on the electric grid so that FirstEnergy would keep buying a lot of coal from Murray's coal mining company. Again, I'm not making this up.

Now it seems that pesky government lawyers figured out that the supposed basis for such an action, Section 202(c) of the Federal Power Act, couldn't possibly justify that. "The White House and the Department of Energy are in agreement that the evidence does not warrant the use of this emergency action."⁴

At this point, a lot of us naively assumed it was safe to go back about our business. We were wrong.



Huntoon



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August 1, 2017

Mr. John D. McEntee III
Special Assistant and Personal Aide to the President
The White House
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Dear Mr. McEntee:

Last evening in Huntington, West Virginia, after President Donald Trump met briefly with Mr. Charles E. Jones, Chief Executive Officer of FirstEnergy Corporation, and the undersigned, he turned to you and said "teli Cohn to do whatever these two want him to do".

Somebody came up with Plan B (or more like Plan 9) of using an even more obscure federal statute to tell FERC to have a rulemaking to subsidize the coal and nuclear clunkers in the country. So here we are.

It's as simple and sad as that.

¹You may remember Robert Murray from the Crandall Canyon Mine collapse in which six miners and three rescuers perished, <http://www.nytimes.com/2008/05/09/us/08cnd-mine.htm>; <http://www.cnn.com/2008/US/07/24/mine.collapse/index.htm>.

²<http://thehill.com/policy/energy-environment/284261-coal-executive-to-host-fundraiser-for-trump>; <https://www.opensecrets.org/news/2017/02/murray-energy-record-giving-2016/>.

³<https://assets.documentcloud.org/documents/3936141/Murray-letters-to-Trump-administration.pdf>.

⁴<https://www.eenews.net/stories/1060059081>.



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COUNTERFLOW

BY STEVE HUNTOON

More Smoking Guns for the Clunkers

By Steve Huntoon

My last coup of coal units have exposed the Department of Energy's "Cash for Clunkers" proposal. The first coal unit discussed how it will cost tens of billions of dollars and subsidize less reliable generating resources to suppress more reliable resources.¹ The second coal unit showed that the proposal is the direct result of meetings between President Trump and Robert Murray, coal mine owner and major fundraiser for the president's campaign,² not some deliberative process involving well-informed, well-intentioned people.



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Robert Murray's Confirmation

A shout-out to Murray for providing a smoking gun one day after my last coal unit ran, confirming that the DOE proposal is a about selling more of his coal to FirstEnergy power plants, one way or another.³

1 in 5,000, and Then Some

Some folks may still think that the situation can't possibly be that outrageous. The DOE proposal can't be that devoid of merit.

Wrong.

The smoking gun below is from ReliabilityFirst, the regional reliability organization responsible for reliability in the Mid-Atlantic and Midwest states (the states that are the focus of the DOE

proposal).⁴

Please bear with me in explaining this graphic. It is displaying the winter. The leftmost coal unit is showing generating resources. The next coal unit is showing possible reduction in those resources due to resource outages, based on the last five winters (including the polar vortex). The percentages on the left are the chance of cumulative outages exceeding the associated outage quantity.⁵

The biggest cumulative reduction in resources has a 0.2% chance of occurring. That is one in 500.

OK, now skip the 50/50 Demand coal unit and look at the 90/10 Demand coal unit. That reflects a one-in-10 chance of the coldest weather.

Please note that resources at a one-in-500 worst case (the second coal unit) are still much more than the peak demand in the one-in-10 worst case (the last coal unit).

In other words, combined there is much less than a one-in-5,000 (500 x 10) chance of peak demand exceeding resources in the winter.

And there's more!

What if that less-than-one-in-5,000 situation were to occur? Fuel supply interruption is unlikely to be a major factor.⁶ And RTOs like PJM have too many tools to avoid customer impact, such as public appeals for conservation and voltage reductions.⁷ And any resource-demand shortage would last only hours, not weeks or of course months.⁸

The DOE proposal is much ado about nothing.

The Worm Will Turn

Here's the third smoking gun. If FERC goes

forward with subsidizing certain resources for an insignificant quantity like fuel supply on site, it should recognize really important quantities like environmental/public health damage.⁹ In the case of coal, the National Research Council of the National Academies estimates that coal generation causes pollution damage averaging \$32/MWh.¹⁰

This means coal resources should pay \$32/MWh for their generation, to be subtracted from whatever revenues they otherwise would receive. The payments should be distributed to those hurt by coal generation.

This administration won't do that, but no administration is forever. Once the precedent is set for FERC to put its thumbs on the scales, coal better hope that the worm never turns.

Steve Huntoon is a former president of the Energy Bar Association, with 30 years of experience advising and representing energy companies and institutions. He received a B.A. in economics and a J.D. from the University of Virginia. He is the principal in Energy Counsel, LLP, www.energy-counsel.com.

¹ <https://www.rtoinsider.com/erc-baseload-power-energy-department-doe-76332/>

² <https://www.rtoinsider.com/murray-energy-department-energy-76203/>

³ Murray said he had pressed Trump and Energy Secretary Rick Perry to have the secretary order financial support for a risk coal plant using DOE emergency authority, but department and White House lawyers ruled him out. "They didn't want to declare an emergency," he said. "It was a low point because we worked hard and I knew it was needed."

"They're doing it in a different way," Murray said. "Now we have another approach that is in use of the same point." <https://www.enr.com/news/energywire/2017/10/11/stories/1060063287>

⁴ <https://www.rfrs.org/reliability/Documents/2016-17%20RF%20Assessment-Winter%20Resource.pdf>

⁵ ReliabilityFirst says, "To help side on the range of random outages are probability percentages related to the amount of random outages that equal or exceed the amount of outages shown above the line on the outage bar."

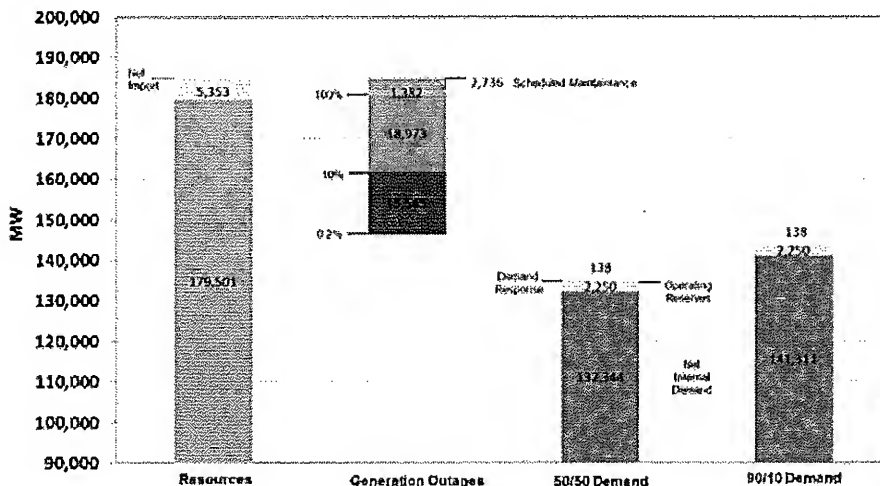
⁶ "Between 2012 and 2016, there were roughly 3.4 billion customer-hours impacted by major electricity disruptions. Overall, 2,382 hours, or 0.00007% of the total, was due to fuel supply problems." <http://rthg.com/news/he-real-electricity-reliability-crisis/>

⁷ Described in excruciating detail in PJM's Manual 13, <http://pjm.com/-/media/documents/manuals/m13.ashx>

⁸ In the polar vortex, the generation emergencies in PJM aggregated 20 hours. <http://pjm.com/-/media/committees-groups/committees/elc/pos/ings/performance-assessment-hours-2011-2014.xls?ashx?l=en>

⁹ An elaborate and persuasive discussion of this proposal is provided by Professors Meredith Fowle and Maximilian Auffhammer: <https://theconversation.com/why-rick-perry-proposed-subsidies-for-coal-all-economics-101-83339>

¹⁰ <https://www.nap.edu/catalog/12794/hidden-costs-of-energy-unpriced-consequences-of-energy-production-and-consumption> (page 92, converting from kilowatt-hours to megawatt-hours). Damage from natural gas pollution is \$1.60/MWh (page 118). Damage from nuclear pollution is small (page 150). These figures do not include greenhouse gases.



Winter 2016/17 PJM outage risk | PJM

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Proposed Rulemaking)

Docket RM18-1-000

Grid Resiliency Pricing Rule)

COMMENTS OF THE BIPARTISAN FORMER FERC COMMISSIONERS

WHO WE ARE AND WHY WE CARE

The Commission's mission is to "assist consumers in obtaining reliable, efficient and sustainable energy services at a reasonable cost through appropriate regulatory and market means."¹ Over the last twenty-five years the Commission has advanced that mission by enabling competitive wholesale markets to promote lower costs and greater efficiencies in the electric utility sector, just as it did in the natural gas sector. Our² common

¹ FERC Website: <https://www.ferc.gov/about/strat-docs/strat-plan.asp>

² Elizabeth Anne (Betsy) Moler, Commissioner 1988-1997, Chair 1993-1997; James J. Hoecker, Commissioner 1993-2001, Chairman 1997-2001; Donald F. Santa, Jr., Commissioner, 1993-1997; Linda Key Breathitt, Commissioner 1997-2002; Pat Wood, III, Chairman 2001-2005; Nora Mead Brownell, Commissioner 2001-2006; Joseph T. Kelliher; Commissioner 2003-2009, Chairman 2005-2009; Jon Wellinghoff, Commissioner 2006-2013, Chairman 2009-2013 ("the Bipartisan Former FERC Commissioners"). We were appointed to the Commission by every President since Ronald Reagan.

goal has been to encourage competition in the electricity sector in order to benefit customers, enhance reliability and facilitate construction of the infrastructure necessary to allow our great nation to grow and prosper.

Over this quarter century, we have each been intimately involved in leading this effort to achieve efficient, reliable energy service through market forces. We believed – with conviction borne of experience -- that requiring nondiscriminatory access to the nation’s electric transmission grids, and fostering open, wholesale competitive markets for the sale of electricity over those grids is the most cost-effective way to deliver energy services to customers, and is therefore in the public interest. Order No. 888, establishing transmission open access, and Order No. 2000, defining the responsibilities of regional transmission organizations (RTOs) are the key mileposts of this era. In addition, we issued hundreds of orders and adopted numerous other rules providing detailed guidance to these markets as they developed. We substantially expanded our market oversight and enforcement capabilities to protect customers from market fraud and abuse. And with those expanded capabilities we engaged in numerous significant enforcement actions to maintain order in these markets and protect customers’ interests. We also worked

tirelessly with market participants and state regulators to achieve balance in our decisions. This shared collaborative mission across party lines and Presidential Administrations has been a model of good government.

This effort to develop organized markets has been successful by almost any measure, reaching over two-thirds of all customers in the nation's economy. Widely diverse interests have invested tens of billions of dollars in both competitive and regulated infrastructure. Customers and the industry have benefitted from lower costs and better, more reliable services. Technological innovation has swept the entire value chain. The Commission's initiative has been supported by virtually all of the participants in this vitally important sector of our economy. It has drawn support from officials in every Presidential Administration over the last three decades, from every relevant committee of the Congress, and from courts at all levels of the Judiciary, including landmark opinions by the United States Supreme Court upholding the Commission's key orders.

OUR VIEW OF THE PROPOSAL

The published proposal in this Docket would be a significant step backward from the Commission's long and bipartisan

evolution to transparent, open, competitive wholesale markets. Pursuing the worthy goal of a resilient power system, the Commission's adoption of the published proposal would instead disrupt decades of substantial investment made in the modern electric power system, raise costs for customers, and do so in a manner directly counter to the Commission's long experience.

In the competitive wholesale markets, many states have elected to separate historic utility-owned power generating facilities from regulated operations, much as the Commission did with natural gas production operations and natural gas pipeline companies in the preceding decade. In the power sector, these separation proceedings were often contentious, and eventually gave rise to many billions of dollars of utility cost recovery for the excess book cost of generating plant over the then-market cost ("stranded costs"). Varying transition periods were set to recover those costs and make the utilities whole for their historic plant investments. It is a subset of these power plants that are the focus of this inquiry.

One critical aspect of competitive wholesale markets is that the risk of these generation investments has been shifted away from captive customers to market participants who could better manage risk (and some who have not been successful doing so).

Another achievement is that competitive wholesale markets have delivered lower-cost electric power and improved the efficiency of the generation fleet. And not just of the original power plants. This revolution stimulated tens of billions of dollars of investment in newer and cleaner power technologies, more efficient plant operations, competitive fuel procurement, efficient dispatch over large regions, more restrained prices, and more competitive (lower) margins. Power prices have tracked fuel prices, particularly that of natural gas, which is, in most hours and in most markets, the marginal unit fuel. New entrants to the competitive wholesale marketplace have included combined-cycle natural gas plants, renewable energy technologies, storage, distributed generation and demand response. It was entirely foreseeable that competition and technological innovation would result in the exit of high-cost generators. Wholesale competition, indeed, has forced existing resources to become more reliable or to exit the market, and many noncompetitive generating units have exited.³

³ This is not just a feature of competitive wholesale markets. Over half of the retirements of coal, gas and nuclear plants since 2002 have been from regulated status. A map depicting these retirements is shown on the Department of Energy's web page introducing the 2017 Staff Report to the Secretary on Electricity Markets and Reliability at <https://energy.gov/downloads/download-staff-report-secretary-electricity-markets-and-reliability>. It is also found in the Staff Report at page 15.

The independent RTOs that have developed under Order No. 2000 have done a superb job operating the transmission networks and managing markets reliably, safely and efficiently for all wholesale power customers. These new independently-run wholesale markets have also enabled retail customer choice programs across the country, most notably in the states that are most impacted by this inquiry.

The RTOs operate open, transparent markets. The least-cost resources for energy for every hour (accounting for reliability needs and transmission constraints) are purchased. In those RTOs with capacity markets, the least-cost resources for capacity (accounting for transmission constraints) are purchased. Those resources which fail to recover sufficient revenues from these markets, or otherwise from their customers, retire.

Subsidizing resources so they do not retire would fundamentally distort markets. The subsidized resources would inevitably drive out the unsubsidized resources, and the subsidies would inevitably raise prices to customers. Investor confidence would evaporate and markets would tend to collapse. This loss of faith in markets would thereby undermine reliability.

The Commission has always been fuel-agnostic, refraining from favoring one fuel over another. This is, in part, out of

recognition that the last federal effort to do that was quickly shown to be a grossly uneconomic mistake.⁴ We acknowledge that the markets today are not pristine; various kinds of external supports for resources still exist. Federal tax subsidies for wind and solar generation have been approved by Congress, as were less overt benefits for oil, gas and coal extraction. The states of New York and Illinois have also recently moved into this arena with the adoption of subsidies for certain nuclear plants. The Commission cannot ignore these interventions, and in fact, should actively inform legislators how such programs impact market operations. But one step the Commission has never taken is to create or authorize on its own the kind of subsidy proposed here.

We know there is always more to do to make wholesale markets more open, more transparent and more efficient; but moving backward is not the way to go. We strongly encourage the Commission to use this opportunity created by the Secretary to identify attributes of the current competitive market system that need to be improved, to crisply define them and either modify the current published proposal or initiate regional proceedings to examine resilience issues and consider the need for market rule changes.

⁴ The Powerplant and Industrial Fuel Use Act of 1978, repealed in 1987.

Several examples follow. All organized markets procure Black Start resources for restoring a power station or a part of the grid without reliance on external power. These procurement methods range from cost-of-service based tariffs in some of the RTOs to a fully competitive process used in ERCOT outside of FERC's jurisdiction. An outcome-based resiliency service could follow a similar pattern, to the extent current ancillary services are not providing it adequately.

Similarly, Reliability Must-Run (RMR) arrangements have been adopted by the RTOs to ensure that a specific resource, which would otherwise be mothballed or retired, remains available for a specified length of time to provide a base level of energy production needed for local reliability. A cost-based formula is often used to calculate the compensation for the affected unit, and the cost is uplifted to the broader RTO market. The RTOs and the Commission are well aware of the negative impact such out-of-market interventions can have on the marketplace. For that reason, RMR contracts have been used relatively sparingly and to address well-defined, limited local reliability challenges that the market could not address in the short term.

The issues of reliability and resiliency are not new to the Commission. These issues are more likely to be related to utility transmission and distribution systems;⁵ after an emergency, it is the power delivery system recovery timeline that drives the restoration of retail service. To be sure, a more robust transmission and distribution system will add resilience in all markets. While there have been some instances of generation-related customer outages,⁶ fuel supply emergencies have been an insignificant cause of customer outages. To the extent these could become an issue, there are market-based solutions that can be employed; for example, the recently-implemented capacity performance programs in PJM and ISO-NE are intended to incent and reward fuel supply certainty, and to severely penalize the failure to provide power at critical times.

⁵ A memorable example of a power delivery failure, the 2003 Northeastern North American Blackout, originated in Ohio when inadequate vegetation management by a transmission-owning utility triggered multiple transmission outages on a summer afternoon and the tripping of a coal-fired power plant in Cleveland. These incidents, combined with inadequate situational awareness across the region, led to cascading failures across northeastern North America, and over fifty million people were out of power, some for up to seven days. The FERC Staff summary of this incident is found at:

<https://www.ferc.gov/CalendarFiles/20040915141105-blackout.pdf>

⁶ See, e.g., <https://www.ferc.gov/legal/staff-reports/08-16-11-report.pdf> regarding a February 2011 cold weather event in Texas and the Southwest. And the causes of the 2000-2001 power outages in California are well known to the Commission (and to these commenters).

In our years of service on the Commission, we all leaned heavily on the use of broad stakeholder processes in the organized markets to develop balanced rules for all to live under, and we remain supportive of the checks and balances such mechanisms provide. To the extent, however, these processes are unable to address the reliability and/or resilience issues raised in this Docket, the independent Boards of the organized markets should be able to file directly for Commission approval of such changes. That is a principal reason why we insisted in Order No. 2000 on such independent governance.

CONCLUSION

In the end, it is the Commission that has statutory responsibility for just and reasonable rates and for maintaining reliability. This is an extremely challenging responsibility shared by five independent Commissioners and a dedicated staff. We therefore urge the Commission to actively defend and promote reliable, competitive energy markets in all arenas. The injection of uncertainty over the future of efficient, competitive electric markets and the highly capital-intensive and vitally important electric industry impairs critical long-term investment and jeopardizes the delivery of cost-effective energy services to

customers.

Accordingly, we urge you not to move forward with the published proposal, and instead address the issues of power system reliability and resiliency consistent with the Commission's long history and in the transparent, bipartisan, policy-centered manner for which this Commission has long been respected.

Respectfully submitted,

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October 19, 2017

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**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid Reliability and Resilience Pricing) **Docket No. RM18-1-000**

**INITIAL COMMENTS OF PJM INTERCONNECTION, L.L.C.
ON THE UNITED STATES DEPARTMENT OF ENERGY PROPOSED RULE**

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October 23, 2017

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Appendix A
PJM’s Answers to Staff Questions

Appendix B
Letter to Mr. Stu Bresler, Sr. Vice President Operations & Markets

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid Reliability and Resilience Pricing) Docket No. RM18-1-000

**INITIAL COMMENTS OF PJM INTERCONNECTION, L.L.C.
ON THE UNITED STATES DEPARTMENT OF ENERGY PROPOSED RULE**

PJM Interconnection, L.L.C. (“PJM”) hereby submits its initial comments on the Notice of Proposed Rulemaking submitted to the Commission by the Secretary of the United States. Department of Energy (“DOE”) on September 28, 2017, as revised upon publication in the Federal Register on October 10, 2017 (“DOE NOPR”).¹ To assist the Commission’s evaluation of the DOE NOPR, PJM also responds, in Appendix A to these comments, to the questions posed in the Commission’s October 4, 2017 request for information relevant to the DOE NOPR.

I. INTRODUCTION

As shown in these Comments, the DOE NOPR is well wide of the mark both in its statement of the problem it seeks to address and in its identification of a reasonable remedy. Accordingly, PJM believes that a prudent path for the Commission should include: (a) re-focusing from the DOE NOPR's broad-brush concern with changes in the resource mix to a deeper, more meaningful, and more productive consideration of how resource mix changes are affecting each individual Regional Transmission Organization

¹ The Secretary proposed the rule pursuant to section 403 of the Department of Energy Organization Act, 42 U.S.C. § 7173. See *Grid Resiliency Pricing Rule*, 82 Fed. Reg. 46,940 (proposed Oct. 10, 2017). The Commission noticed the proposed rule on October 2, 2017, seeking initial comments by October 23, 2017, and reply comments by November 7, 2017. See *Grid Reliability and Resilience Pricing*, Notice Inviting Comments, Docket No. RM18-1-000 (Oct. 2, 2017).

(“RTO”) markets, operations, and reliability and (b) directing the submission of regional solutions, as needed, subject to a filing deadline, that are more in line with the actual history and experience of each RTO given its particular resource mix, and operational and reliability needs. Through these comments, PJM will demonstrate:

- The lack of support, both legally and factually, for the DOE NOPR’s identification of the stated problem;
- The legal and factual infirmities associated with the DOE’s proposed cost of service remedy;
- How the problem identified by the DOE can be restated to more accurately reflect price formation issues that are in line with historic RTO experience; and
- An alternative path promising solutions that allow for regional flexibility while responding to the direction called for in the DOE Staff’s August 2017 Report² to examine correct price formation in organized electricity markets.

Accordingly, PJM urges the Commission to find that the DOE NOPR, although referencing certain legitimate findings made in the DOE Staff Report, does not correctly state the problem nor propose a reasonable solution that meets the just and reasonable standard under the Federal Power Act (“FPA”).³ As shown in these Comments, the DOE NOPR takes observations about overall changes in the resource mix across the nation as the basis for a sweeping and unsupported conclusion that, solely in regions with capacity and energy markets, certain units, regardless of their location, performance history, or competitiveness, deserve full cost recovery through out-of-market mechanisms.

² *Staff Report to the Secretary on Electricity Markets and Reliability*, U.S. Department of Energy (Aug. 17, 2017) (“DOE Staff Report”).

³ 16 U.S.C. § 824e.

Specifically, the DOE NOPR:

- Is inconsistent with very recent findings and recommendations published by the DOE on the subjects of fuel security, grid resilience and RTO market price formation;
- Does not meet basic standards of reasoned decision-making—the claimed facts do not lead to the proposed remedy;
- Contradicts the plain fact that reliability generally has been well-served in regions with capacity and energy markets;
- Would represent a radical departure from years of Commission approval of single-clearing price markets;
- Would undermine reliability and lead to substantially higher costs and economic inefficiencies;
- Contradicts Congressional endorsement of the Commission’s increased reliance on competitive markets;
- Intrudes on state resource choices, include choices to rely on RTO-administered competitive markets;
- Creates distortions in investment decisions that will exacerbate seams issues and actually harm rather than enhance system reliability;
- Attempts to impose blanket, guaranteed cost recovery for numerous resources in a manner flatly contradictory to long-standing, fundamental rate-making requirements under the FPA; and
- Violates the FPA’s prohibition on undue discrimination.

Given coal-fired and nuclear generators comprise just over fifty percent of all currently installed generation capacity in the PJM region,⁴ if the DOE NOPR were adopted, it would remove half of all the capacity in the PJM region from the discipline of competitive market forces. Even accepting the nature and degree of the DOE’s concerns,

⁴ See PJM Interconnection, L.L.C., <http://www.pjm.com/~media/markets-ops/ops-analysis/capacity-by-fuel-type-2016.ashx> (last visited Oct. 27, 2017) (showing nuclear and coal as a combined 53% of the resource mix).

its NOPR fails to consider the most obvious alternative. Assuming there is a shortcoming in capacity and energy markets, the *first* response should be to fix such a shortcoming, which is to say, evaluate structural market changes that better define and value resources' operational and reliability attributes *within the market rather than upending market principles in their entirety*.

As noted above, PJM believes a better identification of the underlying concern, as well as PJM's proposed procedural pathway, is far more appropriate given the legal and practical infirmities of the DOE NOPR as proposed. For its part, PJM has seen changes in the workings of its market traceable to resource mix changes and other industry changes over recent periods. Those observed changes raise clear concerns about market price formation under current rules, including treatment of fast-start resources, recognition of inflexible resources in clearing prices, shortage pricing, and resource characteristics and attributes that currently are not, but should be, identified and valued in the market. In these Comments, PJM describes those observed impacts, and clearly shows the concerns those impacts raise.

In section III herein, PJM explains why reforms are needed in PJM now to ensure that (i) the cost of serving load is reflected in LMP to the fullest extent possible, (ii) uplift is reduced, and (iii) proper economic incentives are maintained. Enhanced energy market price signals will strengthen performance incentives in PJM's markets and is in line with other reforms being considered by PJM. The Commission should act now to ensure that essential reliability services that resources provide are maintained. PJM understands not all regions face the same need for action. An extensive record has been developed to date in this area in the Commission's price formation proceedings, as confirmed by the August

DOE Report. Thus, to move forward, the Commission should direct each RTO/ISO to identify for the Commission whether changes in the resource mix has created issues in their respective regions that are currently not addressed in the market. If any issues exist, the RTO/ISO should prioritize the issues of most consequence to that region and provide, within a Commission-specified deadline that is in the near term, for the submission of proposals, if necessary.⁵ In the alternative, the Commission could expand the scope of its existing open price formation NOPRs to provide for regional solutions around the issues it has broadly identified in those dockets.

II. COMMENTS

A. **The DOE NOPR Incorrectly Identifies a Perceived Problem and Its Cause, and Seeks to Impose a Remedy That Is Not Supported by the Reliability and Resilience Concerns the DOE NOPR Claims to Address**

The DOE NOPR misidentifies a problem, misstates the cause, and then proposes a radical solution that is antithetical to clear Congressional and Commission policy in favor of promoting competitive energy markets. The DOE NOPR assumes without support that there is a resilience crisis that is urgently unfolding because coal and nuclear units are retiring, that market prices are to blame, and that the only solution is to incentivize those coal and nuclear units to remain in service by providing them with guaranteed cost of service rate recovery regardless of whether they are needed for resilience or actually provide measurable resilience benefits. The DOE NOPR does this to the detriment of competitive markets.

⁵ The Commission could require that, to the extent an ISO/RTO identifies no changes are necessary for its region, the ISO/RTO would be required to submit a report to the Commission within that time frame, in place of a tariff proposal.

Given its scope and applicability, the DOE NOPR is a transparent attack on those RTOs and ISOs that operate capacity markets generally⁶—and possibly PJM specifically⁷—without any showing that the misidentified problem exists in PJM or those other markets and exists exclusively in those markets. While claiming to address an imminent threat to the “resilience” of the electric grid from looming retirement of so-called “fuel-secure” baseload resources, the DOE NOPR fails to demonstrate that any such threat is imminent, that retirements are to blame, that competitive markets and specifically capacity markets are forcing retirements that would not have otherwise occurred, or that its proposed solution will actually address the perceived problem. The DOE NOPR’s compensation mandate is wholly unjustified and the Commission should reject it.

The DOE NOPR conflates resilience with reliability. The DOE NOPR does not explain how maintaining a 90-day supply of fuel will enable quick restoration of service following a catastrophic grid event, which is a cornerstone concept of resilience. Instead, the proposal seeks to keep coal and nuclear units online all the time as baseload resources, indicating the DOE NOPR’s concern is reliability, not resilience. The DOE NOPR proposes to maintain otherwise uneconomic coal and nuclear units by affording them cost of service rate recovery, enabling them to offer into the markets at unrealistically low prices, clear, and operate continuously as “baseload.” While secure fuel and a robust resource mix contribute to both reliability and resilience, the DOE

⁶ As the publication of the DOE NOPR in the Federal Register makes plain, *capacity markets* are the sole target of the DOE NOPR’s mandates. See DOE NOPR at 46,944.

⁷ Notably, PJM is the only RTO mentioned in the DOE NOPR.

NOPR fails to show that acquiring 90 days' worth of fuel, and rewarding those units that are able to do so, is necessary to ensure either reliability or resilience.

In fact, the DOE NOPR provides no definition of resilience at all, and further fails by neglecting to identify any performance standards or metrics to evaluate the resilience characteristics, effectiveness, and performance of various resource types. In place of such standards, the DOE NOPR establishes blanket eligibility for any resource that participates in competitive energy markets outside of retail cost of service rate regulation, satisfies an arbitrary 90-day fuel supply requirement, and satisfies other minimum characteristics, regardless of whether the resource is needed to provide reliability or resilience services to the grid.

In short, the DOE NOPR's identification of the perceived problem is not correct, and its proposed imposition of cost of service pricing will not only fail to fix the perceived problem but will have severe adverse effects on competitive markets that the Commission and RTOs like PJM have labored for decades to develop.

1. The Facts and Sources Cited by the DOE NOPR Do Not Support Its Findings or Proposal

Rather than attempting to offer concrete evidence of a looming resilience crisis caused by mass retirement of coal and nuclear units that can only be fixed by destroying competitive markets, the DOE NOPR relies on hollow assertions that the resilience of the nation's electric grid is imminently threatened by premature retirement of so-called fuel-secure baseload resources⁸ and self-evident observations like winter is coming.⁹ The DOE NOPR provides no justification for imposing onto competitive energy markets a

⁸ DOE NOPR at 46,941.

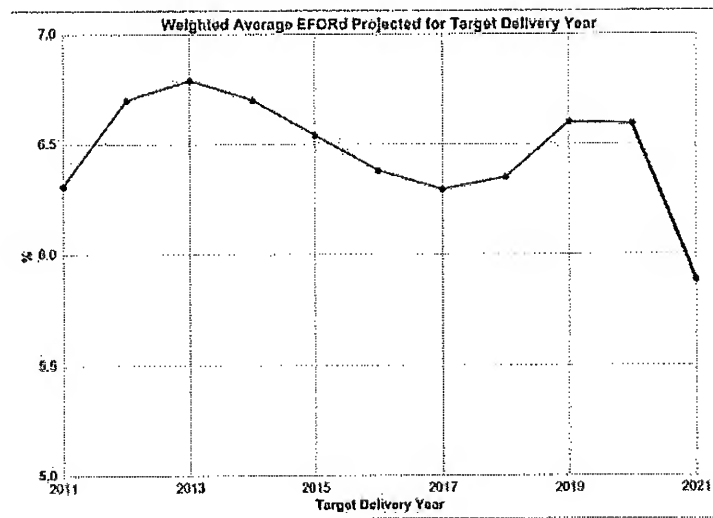
⁹ DOE NOPR at 46,945 (urging the Commission to "take action before the winter heating season begins").

large new out-of-market cost burden for certain select generation resources, and certainly no compelling explanation of why such action is urgently needed to stave off an imminent crisis.

The thin reed upon which the DOE NOPR's call for urgency and its proposed remedy is built is the notion that generation resource retirements are occurring and unusual weather events have presented challenges to grid operators in the past few years. Specifically, the DOE NOPR cites select discussion from the January 2017 Quadrennial Energy Review¹⁰ and the recent DOE Staff Report regarding recent and anticipated future retirements of coal and nuclear units and weather anomalies such as the 2014 Polar Vortex.¹¹ None of these sources, however, support the DOE NOPR's radical replacement of competitive markets with federal cost of service ratemaking for certain favored generators. And in fact, PJM's system remained reliable despite nearly 14,000 MW of coal retirements in the recent past due in part to changing environmental rules. The unusually high unforced outage rate during the Polar Vortex has been mitigated—as can be seen in Figure 1—through various measures, including PJM's Capacity Performance reforms and steps it has taken for winter preparedness, discussed herein and in PJM's responses to OEPI's questions in Appendix A hereto.

¹⁰ Quadrennial Energy Review, *Transforming the Nation's Electricity System: the Second Installment of the Quadrennial Energy Review*, Department of Energy (Jan. 2017), [https://energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20\(Full%20Report\).pdf](https://energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20(Full%20Report).pdf).

¹¹ DOE NOPR at 46,942.

Figure 1: Weighted-Average EFORD Projected for DY

The drop in Weighted Average EFORD projected for 2021 is due to:

- Large amount of deactivations with high EFORD (7,150 MW with 14.56% Weighted Average EFORD)
- Large amount of additions with low EFORD (16,980 MW with 4.42% Weighted Average EFORD). Additions include only those queue projects that had executed an ISA by April 17, 2017.

The DOE NOPR appears to blame competitive market pricing and rules as the sole or primary impetus for retirement of coal and nuclear units. However, the DOE NOPR paints an incomplete picture of the findings and conclusions on which it relies. Notably, the DOE Staff Report identifies many factors contributing to retirements, including, among other things, the age of the plants in question,¹² state public policy

¹² E.g., DOE Staff Report at 22 (“The age of coal plants is an important factor . . . [T]he vast majority of coal-fired capacity was built before 1990, with the average of the fleet built in the mid to late 1970s.”) (emphasis added); *id.* (“According to the Congressional Research Service, the service life of coal-fired generators reportedly ‘averages between 35 and 50 years . . .’” (quoting Richard J. Campbell, *Increasing the Efficiency of Existing Coal-Fired Power Plants*, Congressional Research Service, 6 (Dec. 20, 2013), <https://fas.org/sgp/crs/misc/R43343.pdf>)); DOE Staff Report at 21 (“Most coal-fired capacity (88%) was built between 1950 and 1990, and the capacity-weighted average age of operating coal facilities is 39 years.” (citing Scott Jell, *Most Coal Plants in the United States Were Built Before 1990*, Energy

decisions,¹³ federal environmental requirements,¹⁴ and more cost-effective alternative fuels.¹⁵ While the DOE NOPR also suggests that the retirements it identifies are “premature,”¹⁶ it provides no analysis of whether such retirements truly have occurred prior to the end of the useful lifecycle of the resources in question, further eroding evidentiary support for the DOE NOPR’s costly compensation mandate. While RTOs are examining whether market price formation rules could be revised to recognize the reliability and resilience values brought by a diversity of resource types,¹⁷ the DOE Staff Report provides no evidentiary basis to conclude that market prices are the sole or even primary cause of coal and nuclear retirements. Subsidizing such favored units will not

Information Administration (Apr. 17, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30812>); DOE Staff Report at 23 (“Retired plants are older than the remaining fleet. The coal units that retired in 2015 were mainly built between 1950 and 1970, and the average age of those retired units was 54 years.”).

¹³ E.g., DOE Staff Report at 16 (“Some of the nuclear units now closing are doing so because of state pressure (as with California’s Diablo Canyon, New Jersey’s Oyster Creek, and New York’s Indian Point)”)

¹⁴ E.g., DOE Staff Report at 17 (“Figure 3.3 shows that a significant amount of capacity (the highest on record) retired in 2015, *coinciding with the [Mercury and Air Toxics Standards (“MATS”)] compliance deadline*, which applied to coal- and oil-fired units across the country, as well as the finalization of the *Clean Power Plan rule*.”) (emphasis added); *id.* at 19 (“The compliance deadline for MATS converged with tightening pollution limits in sulfur dioxide (SO₂) and nitrogen oxide (NO_x) trading programs. *Many of the coal and oil retirements in this period were plants whose owners chose to shut down a plant rather than invest in costly environmental remediation measures.*”) (emphasis added); *id.* at 24 (“Most of the power plants being closed today were built in the 1940s to 1960s, *before the Clean Air Act was passed in 1970*. Many have minimal air pollution controls Many closures coincided with the MATS deadlines in 2015 and 2016” (emphasis added) (quoting Ed Malley, *Coal Power Plant Post-Retirement Options*, POWER (Sept. 1, 2016), <http://www.powermag.com/coal-power-plant-post-retirement-options/>)).

¹⁵ E.g., DOE Staff Report at 24 (“The increase in natural gas generation since 2005 is primarily a result of the continued cost-competitiveness of natural gas relative to coal.” (quoting Augustine Kwon, *Natural Gas Generation Make Up the Largest Share of Overall U.S. Generation Capacity*, Energy Information Administration (Apr. 20, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30872>)).

¹⁶ See, e.g., DOE NOPR at 46,941 (“The resiliency of the nation’s electric grid is threatened by the *premature retirements* of power plants”) (emphasis added).

¹⁷ See *infra* Section A(3).

ward off other externalities that the DOE's own staff has identified as contributing to plant retirements.

Similarly, the 2017 QER Report provides no basis to conclude that there is an imminent resilience emergency that can best be solved by distorting competitive markets through imposition of cost of service rate recovery for coal and nuclear resources. Quite the contrary, in its recommendations on "Grid Operations and Planning for Electricity System Reliability, Security and Resilience," the 2017 QER Report recommends such initiatives as (among others): (1) providing incentives for energy storage; (2) improving data for grid security and resilience; (3) requiring states to consider the value of distributed energy resources; (4) enhancing coordination among the industry; (5) encouraging cost effective use of advanced technologies that improve transmission operations; and (6) improving data, monitoring, and analysis capabilities.¹⁸ Absent from the 2017 QER Report's list of resilience recommendations is anything resembling the DOE NOPR's proposal to subsidize aging and inefficient generation units to the detriment of competitive markets.

Likewise mischaracterized and misconstrued are the recent extreme weather events upon which the DOE NOPR relies. Contrary to the DOE NOPR, neither the 2014 Polar Vortex nor the recent hurricanes justify upending existing competitive energy markets. Indeed, as the DOE Staff Report acknowledges, during the Polar Vortex, "[m]any coal plants could not operate due to conveyor belts and coal piles freezing."¹⁹

¹⁸ 2017 QER Report at S-25–S-26.

¹⁹ DOE Staff Report at 98. The DOE Staff Report also concluded that "[w]hile coal facilities typically store enough fuel onsite to last for 30 days or more, extreme cold can lead to frozen fuel stockpiles and disruption in train deliveries." *Id.* at 11-12.

While fuel delivery was an issue during the Polar Vortex, it was not the driving factor behind outages that occurred during the extreme weather event, nor was gas-fired generation the villain, nor coal and nuclear the savior, that the DOE NOPR suggests them to be. Specifically, during the Polar Vortex, of the approximately 40,200 MW of forced generator outages in PJM, coal steam outages (considering all sources of failure) were the largest outage category, at 13,700 MW (representing 34% of the outages), and nuclear outages totaled 1,400 MW.²⁰ Having a 90-day fuel supply would not have cured these outages, for it was not a lack of fuel that caused them. Additionally, as PJM has explained, all resource types, except for wind and demand response, performed sub optimally during the extreme weather event:

At the time of the peak demand hour on January 7, approximately 22 percent of total installed generation capacity in PJM (of all fuel types) was unavailable because of forced outages associated with routine equipment breakdowns, *problems related to operating in extreme cold temperatures* and, fuel-supply issues. Although there has been much focus on gas issues associated with interruptible transportation, *overall the gas interruptions were not the major driver of the high forced outage rates* experienced in the PJM region. *Natural gas interruptions, although significant, removed less than five percent of the total capacity* required to meet demand on January 7, *while equipment issues associated with both coal and natural gas units made up the far greater proportion of forced outages.*²¹

Notwithstanding these significant challenges, as the DOE Staff Report explains, PJM and other “grid operators generally met demand, even under these severe conditions.”²² Fuel

²⁰ *Analysis of Operational Events and Market Impacts During the January 2014 Cold Weather Events*, PJM Interconnection, L.L.C., 26 (May 8, 2014), <http://www.pjm.com/~media/library/reports-notice/weather-related/20140509-analysis-of-operational-events-and-market-impacts-during-the-jan-2014-cold-weather-events.ashx>.

²¹ Post-Technical Conference Comments of PJM Interconnection, L.L.C., Docket No. AD14-8-000, at Appendix 1 (Statement of Michael J. Kormos Executive Vice President – Operations, PJM Interconnection, L.L.C. at 3-4) (May 15, 2014) (“Kormos Statement”) (*emphasis added*).

²² DOE Staff Report at 98.

supply was not the sole or even primary issue affecting grid operations during the Polar Vortex, and compensating *all* qualified “fuel-secure” generators for maintaining a 90-day fuel supply would not have made a significant difference in addressing the impacts of the Polar Vortex.

Likewise, the DOE NOPR’s reliance on Superstorm Sandy and recent hurricanes also fails to justify its radical cost of service subsidy scheme. As an initial matter, in high wind events like hurricanes, it is often the distribution and, to a lesser degree, transmission system that are most impacted. For example, as NERC notes in its assessment of Superstorm Sandy, 16,738 MW of fossil fuel generation became unavailable during the storm, which “did not result in any capacity issues,” “[b]ecause of the amount of load preemptively *off or unavailable to the distribution system.*”²³ NERC also noted that “[w]hile there was sufficient generation capacity available to meet the load as restoration progressed, there were some cases where customer restoration was hindered by *local area transmission outages.*”²⁴ In other words, even though generating power was available to serve customers, power line damage prevented it from being delivered to many customers experiencing service outages. Having 90 days’ worth of fuel onsite does nothing to counteract the impact of distribution or transmission infrastructure damage that is often the cause of customer service outages during a hurricane or similar event.

²³ *Hurricane Sandy Event Analysis Report*, NERC, 22 (Jan. 2014), http://www.nerc.com/pa/rrm/ea/Oct2012HurricaneSandyEvtAnlyssRptDL/Hurricane_Sandy_EAR_20140312_Final.pdf (“NERC Hurricane Sandy Report”) (emphasis added).

²⁴ *Hurricane Sandy Event Analysis Report*, NERC, 22 (Jan. 2014) at 5 (emphasis added).

The evidence and events that the DOE NOPR cites do not support its assertion of a resilience crisis or its rationale for degrading competitive markets in the name of fuel resilience. As experience during extreme weather events has shown, myriad factors contribute to outages, and fuel security, while beneficial, provides no guarantee of resilience during such events. Given the paucity of evidence to support its expensive and anticompetitive cost of service guarantee, the DOE NOPR appears aimed less at truly addressing resilience concerns and more at benefitting certain preferred generators and fuels and the industries they support.

2. The PJM Region Is Reliable, and PJM's Competitive Markets Have Been Instrumental in Helping Ensure that Reliability.

As explained above, the DOE NOPR offers nothing to show that market regions in general, or the PJM Region in particular, is in any danger of failing to meet reliability or resource adequacy requirements now or in the future. This is not surprising, as the PJM Region unquestionably is reliable, and its competitive markets have for years secured commitments from capacity resources that well exceed the target reserve margin established to meet NERC requirements. And the PJM capacity market also includes rigorous performance requirements, enforced by market mechanisms—which were affirmed just this year by a U.S. Court of Appeals.²⁵

First, contrary to suggestions that the DOE NOPR changes are needed to “keep[] the lights on,”²⁶ PJM’s capacity market has consistently secured Capacity Resources above and beyond the level needed to meet the NERC standard of no more than one

²⁵ *Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656 (D.C. Cir. 2017).

²⁶ *Department of Energy Missions and Management Priorities Before the H. Comm. On Energy and Commerce Subcomm. On Energy*, 115th Cong. 3 (2017) (testimony of Secretary Rick Perry, U.S. Department of Energy).

expected loss-of-load event every ten years. For the next three Delivery Years (extending through May 31, 2021), the Base Residual Auctions resulted in reserve margins of 19.8% (2018/2019 DY), 22.4% (2019/2020 DY), and 23.3 % (2020/2021 DY).²⁷ These reserve margins are about four to six percentage points above the level needed to meet the NERC loss-of-load-expectation criteria.²⁸ These auctions also have elicited significant investments in new generation, at competitive costs generally below administrative estimates of the cost of new entry.²⁹ Notably, the capacity committed to the PJM Region through 2021 (and entitled to receive capacity revenues for at least that long) include coal and nuclear plants (of all ages) in megawatt amounts that rival or exceed the capacity base for those two plant types seen in any other region in the continental U.S.³⁰

Second, even looking past aggregate resource commitments to consider reliability of the resource mix, PJM's initial rigorous analysis of that issue earlier this year³¹ yielded encouraging results, and found no immediate (or even near-term) emergencies.³² PJM assessed future likely and plausible generation resource mix portfolios on their ability to provide certain essential reliability services, including frequency response, voltage control, ramp, fuel assurance, flexibility, black start, environmental restrictions, and

²⁷ *2020/2021 PJM Base Residual Auction Results*, PJM Interconnection, L.L.C., 6 tbl. 1 (May 23, 2017), <http://www.pjm.com/~media/markets-ops/rpm/rpm-auction-info/2020-2021-base-residual-auction-report.ashx?la=en>.

²⁸ *Id.*

²⁹ *Id.*

³⁰ See Figure 3 below, and the cited EIA source data (which shows PJM had installed coal and nuclear plant capacity at year-end 2015 in excess of 100,000 MWs).

³¹ See PJM's *Evolving Resource Mix and System Reliability* (March 30, 2017), available at <http://www.pjm.com/~media/library/reports-notice/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx> ("Evolving Resource Mix and Reliability Report").

³² *Id.* at 4-5.

equivalent availability factor.³³ PJM also tested those possible future portfolios using both a standard loss-of-load analysis, and an adjusted analysis that accounted for the potential added load-loss risk of heavy reliance on intermittent resources. PJM found that “the expected near-term resource portfolio is among the highest-performing portfolios and is well-equipped to provide the generator reliability attributes.”³⁴ That expected near-term portfolio is for 2021, taking account of trends in generator deactivation and added capacity from the PJM Generator Interconnection Queues.³⁵ More work and analysis needs to be done in this area, as discussed later in these comments, but the analysis to date strongly indicates that market mechanisms *can effectively meet* the challenges posed by a changing resource mix.

Third, the DOE NOPR ignores the PJM competitive markets’ demonstrated strength as a platform for innovation and adaptation. Competitive markets are very good at quickly recognizing and rewarding efficiency gains. That inherent strength is itself an important advantage to maintaining a resource base that leverages technological change to help ensure long-term reliability. Competitive markets, therefore, have seen markedly higher development and implementation (compared to non-market areas) of highly efficient, latest generation combined cycle plants, new storage technologies, and demand response.³⁶ At the same time, competitive markets have not been conducive to high-risk, high-capital-cost, experimental technologies—which, more often than not, have produced

³³ *Id.* at 3.

³⁴ *Id.* at 4 (footnote omitted).

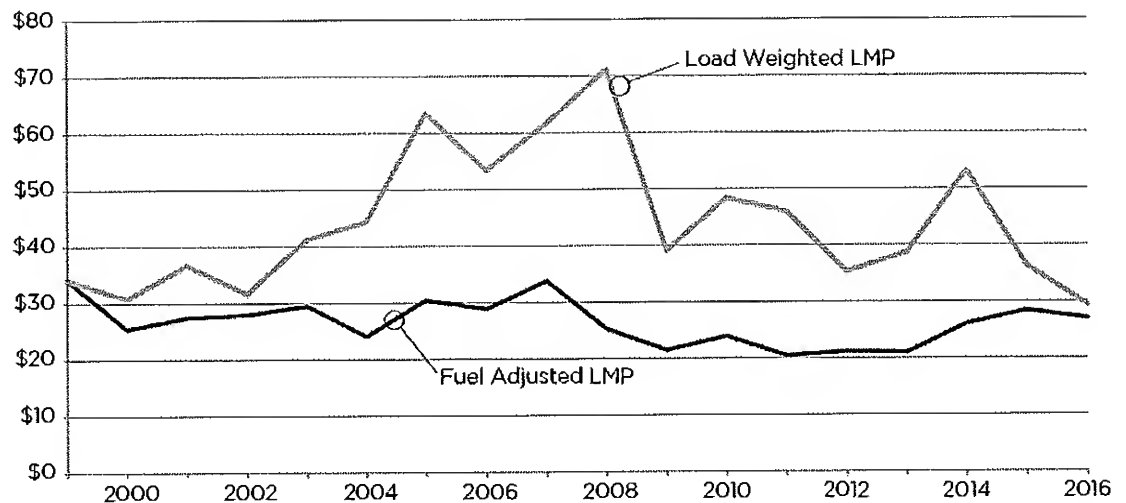
³⁵ *Id.* at 4 n.9.

³⁶ *Resource Investment in Competitive Markets*, PJM Interconnection, L.L.C., (May 5, 2016), <http://www.pjm.com/~media/library/reports-notice/special-reports/20160505-resource-investment-in-competitive-markets-paper.ashx> (“PJM 2016 Resource Investment Whitepaper”).

far more cost than benefit for ratepayers in the regulated areas where such projects have been pursued.³⁷

Indeed, the market is able to handle changes in technologies and shifts in resource mix in a manner that resulted in lower energy market Locational Marginal Prices (“LMPs”) (Figure 2). As can be seen, load-weighted LMPs peaked in 2008. Since that time, the factors discussed above (particularly the reduction in price, and increase in availability, of natural gas) have resulted in a drop of over 50% in load-weighted LMPs. By contrast, the fuel-adjusted LMP (which seeks to factor out differences in fuel cost), has changed relatively little—revealing that the observed drop in load-weighted LMP has indeed been largely driven by fuel cost changes.

Figure 2. Annual Fuel-Adjusted and Load-Weighted LMP (1999-2016)



Furthermore, for roughly two decades the PJM energy market, based on the LMP construct, has provided reliable price signals that, among other things, have helped to drive efficient resource entry and exit.³⁸

³⁷ *Id.*

3. *The DOE NOPR Ignores Efforts Underway to Address Resilience through Markets*

PJM is examining resilience, as distinguishable from reliability, and the DOE NOPR overlooks many of what PJM would consider to be the more salient resilience issues, which relate to the transmission grid and not to supply resources. Moreover, the DOE NOPR suggests a remedy, namely cost of service compensation for resources that satisfy an on-site fuel storage criterion, which would yield few if any system reliability or resilience benefits.

On March 30, 2017, PJM issued a report that examined the reliability implications of PJM's changing resource mix, as driven by environmental regulations, the availability of low-cost natural gas, the increasing penetration of renewable resources and demand response, and the potential retirements of nuclear power plants.³⁹ Among other things, the Evolving Resource Mix and Reliability Report found: (1) as the potential resource mix moves in the direction of less coal and nuclear generation, generator attributes of frequency response, reactive capability, and fuel assurance decrease, but flexibility and ramping attributes increase; and (2) operational reliability can be maintained even if natural gas-fired resources replaced all coal-fired and nuclear generation resources.⁴⁰

Notably, the Evolving Resource Mix and Reliability Report primarily examined *reliability* in the context of the bulk electric system, not *resilience*. Resilience, as PJM and other entities define it, which is the putative focus of the DOE NOPR, relates to preparing for, operating through, and recovering from a high-impact, low-frequency

³⁸ PJM began operating as an independent system operator, using the LMP construct, on January 1, 1998. See *Pennsylvania-New Jersey-Maryland Interconnection, et al.*, 81 FERC ¶ 61,257 (1997); *order on reh'g*, 92 FERC ¶ 61,282 (2000).

³⁹ See Evolving Resource Mix and Reliability Report at 1; see also DOE Staff Report at 99.

⁴⁰ Evolving Resource Mix and Reliability Report at 5.

event. Resilience means remaining reliable even during those events. PJM believes a heavy reliance on one resource type, such as a theoretical resource portfolio composed of 86 percent natural gas-fired resources, *could* raise questions about system resilience.⁴¹ Relying too heavily on a single fuel type could negatively impact resilience because of the potential for reduced diversity of resource attributes.⁴² In general, a more diverse resource portfolio is a more resilient portfolio. PJM's resource portfolio is more diverse today than ever before, and the PJM region is less dependent on any single fuel type than other regions of the country.⁴³

PJM and its stakeholders regularly examine resilience-related low-probability and high-impact events that could cause reliability impacts to the PJM system. For example, PJM recently held a stakeholder event on security and resilience,⁴⁴ including cyber and physical security, and previously held a stakeholder event on fuel diversity and resilience.⁴⁵ Also, PJM has focused particular attention on techniques to identify and mitigate natural gas infrastructure vulnerabilities. On October 10, 2017 the PJM Operating Committee reviewed information on resilience planning related to gas-electric coordination.⁴⁶ To advance resilience, PJM intends to create operating procedures that

⁴¹ *Id.* at 5.

⁴² *Id.* at 5-6.

⁴³ See Figure 3, above.

⁴⁴ See *Grid 20/20: Focus on Security & Resilience*, PJM Interconnection, L.L.C., <http://www.pjm.com/committees-and-groups/stakeholder-meetings/symposiums-forums/grid-2020-focus-on-security-and-resilience.aspx> (last visited Oct. 23, 2017).

⁴⁵ See *Grid 20/20: Focus on Resilience (Fuel Mix Diversity & Security)*, PJM Interconnection, L.L.C., <http://www.pjm.com/committees-and-groups/stakeholder-meetings/symposiums-forums/grid-2020-focus-on-resilience-part-1-fuel-mix-diversity-and-security.aspx> (last visited Oct. 23, 2017).

⁴⁶ See *Operationalizing Gas Pipeline Contingencies Normal and Conservative Operations*, PJM Interconnection, L.L.C., (Oct. 10, 2017), <http://www.pjm.com/-/media/committees-groups/committees/oc/20171010/20171010-item-16-gas-electric-contingencies-update.ashx>.

will define specific processes to be followed to evaluate the risk on the electric system of natural gas infrastructure vulnerabilities, with a clear understanding of natural gas infrastructure redundancy including generator dual-fuel capabilities such as on-site liquid fuel. Those procedures also will operationalize natural gas pipeline contingencies under normal operations and external threat conditions, such as cyber and physical threats. Given the early stages of this collaboration, the next steps for PJM and its stakeholders include defining metrics for resilience and criteria for evaluating potential mitigating actions not limited to generation as was the focus of the DOE NOPR, but, rather also to include market changes, operational changes such as reserves, transmission upgrades and evolving distributed energy resource technologies and resources. PJM is also highly engaged with stakeholders in incorporating resilience as a driver or a factor in the transmission planning process with the objective of minimizing or eliminating in some cases the criticality of facilities.

4. *The DOE NOPR Provides No Basis for Singling Out RTO Markets, Much Less RTOs with Capacity Markets*

The DOE NOPR bemoans the spate of “premature” retirements of coal and nuclear generation resources as causing a resilience crisis that demands federal government intervention in the form of cost of service subsidies. According to the DOE NOPR, this phenomenon appears to occur only in competitive RTO-administered markets, which purportedly favor cheaper, but less fuel-secure, natural gas to the detriment of coal and nuclear. The DOE NOPR ties the increased reliance on natural gas (and corresponding decreased reliance on coal and nuclear) to an asserted reduction in resilience that can be fixed by only reverting these markets from competitive back to cost of service rate recovery – but only for such purported fuel-secure generators.

The narrowed scope of the DOE NOPR (from when it was originally issued to its publication in the Federal Register)⁴⁷ essentially expresses the opinion that States that have elected to rely on RTO markets to assure resource adequacy exclusively through revenues offered in their energy and capacity markets have made the wrong choice. The Federal Power Act creates a collaborative, federal-state scheme of regulation of the electricity industry, and expressly reserves to the states control over in-state “facilities used for the generation of electric energy,”⁴⁸ which includes determining the “[n]eed for new power facilities, their economic feasibility, and [retail] rates and services.”⁴⁹ By rejecting cost of service regulation in favor of markets – a decision in many cases made at the insistence of the predecessor companies that today are demonstrating a kind of buyer’s remorse – states have exercised their authority under the FPA’s jurisdictional split. The DOE NOPR implies that these States have made dangerous decisions that have brought on a resilience crisis caused by markets forcing a “premature” retirement of “fuel-secure” resources. The radical response suggested by the DOE NOPR is not merely encouragement or some form of directive that affected states reverse course and “re-regulate” generation under cost of service principles. Instead, the DOE NOPR calls for federal ratemaking that would pre-empt state preferences, frustrate state legislative

⁴⁷ *Compare Grid Resiliency Pricing Rule, Notice of Proposed Rulemaking*, Department of Energy, (Sept. 28, 2017), https://energy.gov/sites/prod/files/2017/09/f37/Notice_of_Proposed_Rule_making.pdf (“The requirements of this rule shall apply to Commission-approved independent system operators or regional transmission organizations with a day-ahead and a real-time market or the functional equivalent.”), with DOE NOPR at 46,948 (“The requirements of this rule shall apply to Commission-approved independent system operators or regional transmission organizations with *energy and capacity markets and a tariff that contains a day-ahead and a real-time market or the functional equivalent.*”).

⁴⁸ 16 U.S.C. § 824(b)(1); see *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1292 (2016).

⁴⁹ *Pacific Gas & Elec. Co. v. State Energy Resources Conservation and Development Comm’n*, 461 U. S. 190, 205 (1983).

actions and impose (contrary both to the Federal Power Act and to longstanding judicially clarified divisions of federal and state responsibilities as relates to resource adequacy) a Washington-based federal solution in lieu of actions individual states might take to meet resilience objectives. Accordingly, the DOE NOPR's singular focus on regions with capacity markets (and possibly on PJM in particular) is arbitrary and unsupported, which calls into question whether the claimed focus of the rule—i.e., resilience—is not a pretext for other objectives, such as supporting certain politically-favored resources.

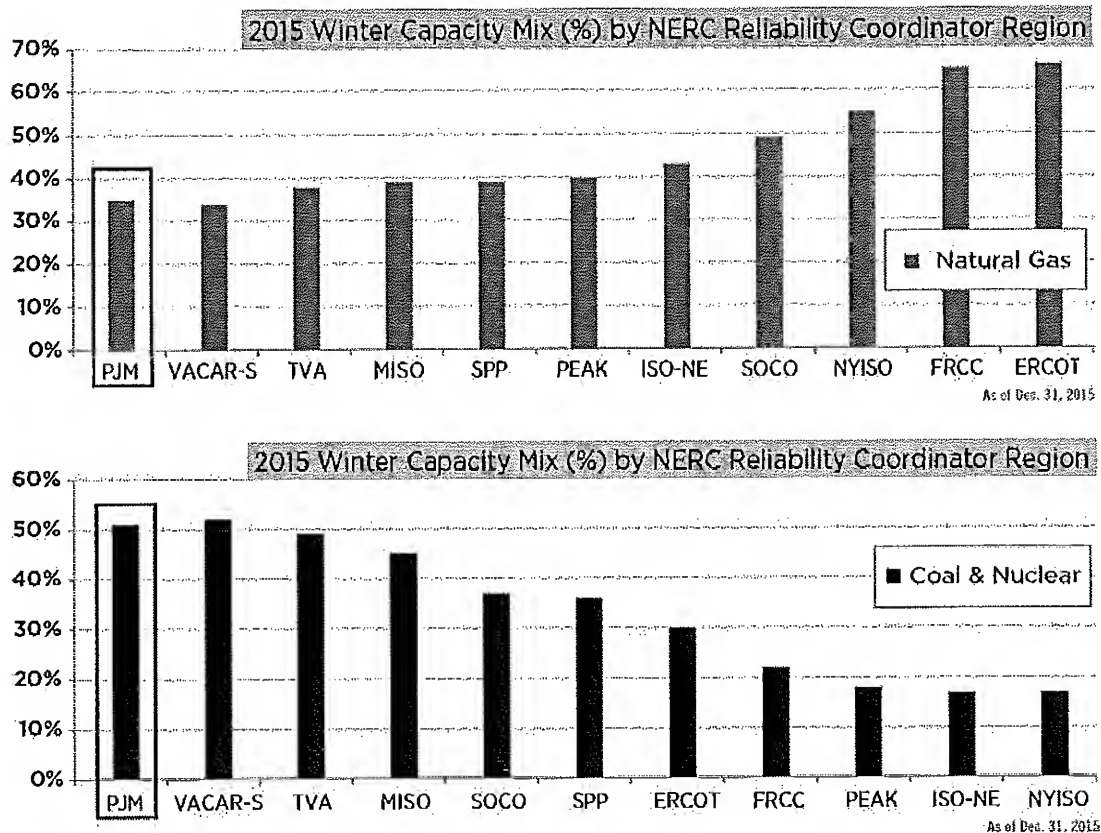
The DOE NOPR provides no explanation why RTO's with capacity markets in general or PJM's capacity market specifically are to blame for the so-called resilience crisis. In fact, evidence from the DOE's own data demonstrates that RTOs are no more affected than any other region, by resource retirements and changes in the resource mix. First, RTO regions do not rely more heavily on natural gas for winter capacity⁵⁰ than non-RTO regions, as demonstrated by Energy Information Administration data for winter 2015.⁵¹ Indeed, as shown by Figure 3, PJM's winter capacity mix showed nearly the

⁵⁰ PJM chose to review winter data because the DOE NOPR suggests that the resilience crisis is heightened in the winter due to a heavy reliance on natural gas both for power generation and heating fuel. *E.g.*, DOE NOPR at 46,942 (“Using these retiring units enabled utilities to meet customer demand during a period when already limited natural gas resources were diverted from electricity production to meet residential soheating needs. Once retired, however, these units will not be available for the next unseasonably cold winter.”).

⁵¹ The Energy Information Administration's 2015 Form EIA-860 Data - Schedule 3, 'Generator Data' (Operable Units Only), at columns: *Technology*; *Winter Capacity (MW)*; and Data - Schedule 2, 'Plant Data'; *Winter Capacity (MW)*; at columns: *Balancing Authority*; <https://www.eia.gov/electricity/data/eia860/>, (both retrieved Oct. 16, 2017), were the primary source for bar charts in Figure 3, supplemented with data from “NERC Balancing Authorities and Reliability Coordinators,” North American Electric Reliability Corporation; http://www.nerc.com/comm/OC/RS%20Landing%20Page%20DL/Related%20Files/BA_Bubble_Map_20160427.pdf; <http://www.nerc.com/pa/rrm/TLR/Pages/Reliability-Coordinators.aspx>; (Retrieved Oct. 16, 2017); and “Report on the Capacity, Demand and Reserves (CDR) in the ERCOT Region, 2017-2026,” The Electric Reliability Council of Texas; at p. 32; Dec. 15, 2016;

lowest winter reliance on natural gas and a significantly greater contribution of combined coal and nuclear resources to fulfill winter needs than almost all other NERC regions in the continental U.S.

Figure 3. 2015 Winter Capacity Mix: Natural Gas v. Coal & Nuclear Combined



As the 2015 winter capacity data demonstrate, among the regions most reliant on natural gas were ERCOT, Florida, and the Southern Company areas—all of which operate outside of Commission-approved RTOs and without RTO-administered capacity markets. PJM’s reliance on gas-fired generation is among the lowest of the regions studied. Likewise, PJM’s proportion of coal and nuclear in its winter fuel mix is higher

<http://www.ercot.com/content/wcm/lists/96607/CapacityDemandandReserveReport-Dec2016.pdf>
(Retrieved Oct. 16, 2017).

than any region (except for VACAR, which has had about the same percentage reliance on coal and nuclear) further demonstrating that the DOE NOPR's worry about overreliance on natural gas or mass retirements of coal and nuclear are no more applicable in PJM specifically or capacity markets generally, than they are in other areas of the country. Under the DOE NOPR's narrow view that "fuel-secure" resources are needed to ensure reliability and resilience, the PJM region is more fuel diverse and resilient than vast regions without capacity and energy markets, and would remain so even if PJM reduced its reliance on coal and nuclear (to, for example, the level maintained by the Southern Companies region), or increased its reliance on natural gas (to, for example, the level maintained in Florida or ERCOT).

This comparison underscores that the DOE NOPR's criteria and scope are either arbitrary and irrational or motivated by altogether different objectives than those offered as the basis for urgent action. Reliability and resilience are far more complex than the mere maintenance of a preferred class of allegedly fuel-secure resources, and the DOE NOPR offers nothing to show that there is a greater concern with either reliability or resilience in the areas, like PJM, served by capacity and energy markets.

PJM assessed the probability of generator retirements in PJM versus those in "regulated environments" (i.e., areas outside of competitive markets), and found that the "probability of the mathematically average generator retiring in PJM is lower than in the regulated environment."⁵² The analysis concludes that "[a] statistical examination of retirement data in PJM compared to regulated environments refutes any assertion that

⁵² PJM 2016 Resource Investment Whitepaper at 32.

PJM markets are prematurely retiring economically viable generation.”⁵³ Regarding the changing resource mix, PJM has explained,

[t]he electricity resource mix has shifted throughout PJM’s history, and the PJM system has proven reliable in the face of change. Adequacy and security are two key aspects of reliability. The PJM planning process and capacity market maintain resource adequacy by ensuring sufficient resources to meet demand under extreme conditions.⁵⁴

Indeed, the performance of the PJM system in response to incredibly taxing events like the 2014 Polar Vortex demonstrate the reliability and resilience of the system created by effective transmission planning and development and the energy and capacity markets. The DOE NOPR’s singular focus on capacity markets, therefore, is unjustified.

PJM and other markets also are adaptable to changes that impact reliability or resilience. The Polar Vortex presents a compelling example. Despite serving customers reliably throughout the Polar Vortex, in response to the level of forced generation outages and performance failures, PJM and other regions set about to study the underlying causes and provide solutions. PJM determined that primary operational challenges presented by events such as the Polar Vortex could be mitigated if generation suppliers made investments in weatherization or increased operations budgets.⁵⁵ PJM’s “Capacity Performance” reforms adopted market solutions to the generation challenges wrought by events like the Polar Vortex by: (1) incentivizing better performance by paying generators for performance and allowing recovery of investments to enhance operational

⁵³ *Id.* at ii.

⁵⁴ Evolving Resource Mix and Reliability Report at 8.

⁵⁵ Reforms to the Reliability Pricing Market (“RPM”) and Related Rules in the PJM Open Access Transmission Tariff (“Tariff”) and Reliability Assurance Agreement Among Load Serving Entities (“RAA”) of PJM Interconnection, L.L.C., Docket No. ER15-623-000, at 19 (Dec. 12, 2012).

reliability (e.g., firming fuel supply, investing in dual-fuel capability, increased staffing, capital investments for better operational flexibility, and cold-weather testing on alternate fuels); and (2) discouraging poor performance by imposing a strong monetary penalty (with limited exceptions).⁵⁶ Other regions affected by the Polar Vortex undertook similar market-oriented reforms in response.⁵⁷ The DOE NOPR fails to mention or consider the import of these reforms and the ability of the organized markets to address emerging needs effectively through market-based mechanisms in line with the Commission's long-standing policy of promoting competition, as opposed to the regression to cost of service ratemaking proposed in the DOE NOPR.

Moreover, the DOE NOPR flatly ignores the many tools and benefits that RTOs and their markets provide to promote resilience and reliability in the face of extreme events. RTOs possess dispatch control over extensive resources within their regions, cohesively manage transmission system reliability over large regions to ensure the delivery of those resources, provide reliability coordination and other services over a vast transmission system, optimize operating and other reserves over a wider area, and develop mechanisms such as day-ahead energy and capacity markets to ensure sufficient capacity prior to real-time. The shortsightedness of the DOE NOPR in failing to recognize these benefits suggests that reliability and resilience may not be the underlying goals of the DOE NOPR's proposal.

⁵⁶ See *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at P 9 (2015), *order on reh'g*, 155 FERC ¶ 61,157, at P 26 (2016), *aff'd sub nom. Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656, 670 (D.C. Cir. 2017); *ISO New England Inc.*, 147 FERC ¶ 61,172 (2014), *reh'g denied*, 153 FERC ¶ 61,223 (2015), *appeal pending sub nom. New England Power Generators Ass'n v. FERC*, No. 16-1023 (D.C. Cir. Jan. 19, 2016).

⁵⁷ See *ISO New England, Inc.*, 149 FERC ¶ 61,009, at P 17 (2014).

PJM's experience and analysis demonstrates that the DOE NOPR's focus on competitive capacity markets as the root of any perceived resilience problem is misplaced. The DOE NOPR provides no justification for undermining competitive markets in regions that have adopted robust capacity markets, while assuming that there is no similar problem outside of such markets.

B. The DOE NOPR Fundamentally Undermines Competitive Markets.

The DOE NOPR is a direct assault on competitive markets that the Commission and RTOs have spent years building and refining. By subsidizing one category of resources with full cost of service rate recovery, the DOE NOPR provides an anticompetitive advantage that will lead to uneconomic outcomes in the market. The Commission should decline to adopt the DOE NOPR as contrary to Commission and Congressional policy, and not reverse course on decades of promoting greater competition in the energy industry.

As the Commission is aware, RTO markets like PJM's are single-clearing price auctions in which the RTO clears the total amount of generation needed to serve load reliably at the clearing price that is expected to represent the marginal cost of supply. The Commission has endorsed the concept of single-clearing price markets as being superior to cost of service ratemaking:

Such competitive market mechanisms provide important economic advantages to electricity customers in comparison with cost of service regulation. For example, a competitive market with a single, market-clearing price creates incentives for sellers to minimize their costs, because cost-reductions increase a seller's profits. And when many sellers work to minimize their costs, competition among them keeps prices as low as possible. While an efficient seller may, at times, receive revenues that are above its average total costs, the revenues to an inefficient seller may be below its average total costs and it may be driven out of business. This market result benefits customers, because over time it results in an

industry with more efficient sellers and lower prices. By contrast, sellers have far weaker incentives to minimize costs under cost-of-service, because regulation forces a seller to reduce its prices when the seller reduces its cost.⁵⁸

Subsidizing certain categories of generators to prevent them from retiring fundamentally undermines the competitive market structure and displaces least cost, more efficient resources that would otherwise clear the market. Guaranteeing full cost of service recovery to certain resources permits those often higher-cost resources to offer into the market at artificially-low prices in order to guarantee that they will clear the market, knowing that they will be made whole by the subsidy. The effect is to crowd out lower cost, most efficient resources from clearing the market. Subsidies also drive down clearing prices, which provides a disincentive to invest in newer generation and new technologies, leaving in place aging, less efficient generation resources, while at the same time encouraging early retirement of lower cost, more efficient generators that cannot compete on price with subsidized generators. In short, providing full cost of service rate recovery to favored resources severely distorts market prices and investment signals, significantly degrading competitive markets, and leaves in place uneconomic, aging assets that would be forced into retirement but for the subsidy.

C. The DOE NOPR's Many Legal Infirmities Preclude Its Adoption.

The DOE's NOPR offers no defensible legal rationale for its proposal. In fact, the proposal simply cannot be reconciled with the Federal Power Act or with the policies Congress has embedded in the statute.

1. The DOE NOPR Contradicts Congressionally Endorsed Reliance On Competitive Wholesale Electricity Markets.

⁵⁸ *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at P 141 (2006).

Commencing with its Order No. 888,⁵⁹ the Commission has required open access transmission and has encouraged the ongoing development of wholesale power markets, including the organized, regional markets administered by ISOs and RTOs. The overriding purpose of these efforts has been pursuit of Congress's "goals of creating more competitive bulk power markets and lower rates for consumers."⁶⁰ Indeed, the Energy Policy Act of 2005, in the Commission's view, embodies a national policy "to foster competition in wholesale electric power markets"⁶¹ and "affirmed a commitment to competition in wholesale natural gas and electricity markets as national policy."⁶²

The DOE NOPR openly and irreconcilably conflicts with this national policy objective. The DOE's proposal is targeted specifically at Commission-approved RTOs and ISOs with capacity and energy markets.⁶³ If adopted, the proposed rule would

⁵⁹ *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 1991–1996 FERC Stats. & Regs., Regs. Preambles ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, 1996–2000 FERC Stats. & Regs., Regs. Preambles ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *reh'g denied*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in part & remanded in part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

⁶⁰ Order No. 888 at 31,673; *see also id.* at 31,644 (stating a "goal of the Energy Policy Act [of 1992] was to promote greater competition in bulk power markets"); 31,683 (stating no-action alternative would be "counter to the direction from the Congress in the Energy Policy Act and the needs of the marketplace and electricity consumers").

⁶¹ *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, 2008–2013 FERC Stats. & Regs., Regs. Preambles ¶ 31,281 at P 1 (2008), *as amended*, 126 FERC ¶ 61,261, *order on reh'g*, Order No. 719-A, 2008–2013 FERC Stats. & Regs., Regs. Preambles ¶ 31,292, *reh'g denied*, Order No. 719-B, 129 FERC ¶ 61,252 (2009). *See also* Order No. 719-A at P 122 (in the Energy Policy Act of 2005, Congress ratified the "Commission's policy . . . to promote competition in wholesale electric power markets").

⁶² *Transparency Provisions of Section 23 of the Natural Gas Act*, Notice of Proposed Rulemaking, FERC Stats. & Regs. ¶ 32,614, at P 11 (2007).

⁶³ DOE NOPR, 82 Fed. Reg. at 46,948 (proposed amended version of 18 C.F.R. § 35.28(g)(10)(ii)). The DOE's proposed regulatory language is not entirely clear. The quoted provision would state that "[t]he

require each affected ISO/RTO to create and collect cost of service rates for each “eligible resource” under the new rule. Coal-fired and nuclear generators comprise just over fifty percent of all currently installed generation capacity in the PJM region,⁶⁴ meaning that the DOE NOPR proposal, if adopted would remove half of all the capacity in the PJM region from the discipline of competitive market forces. This outcome is clearly incompatible with “the Congressional mandate in the Energy Policy Act of 1992 to encourage competition in electricity markets.”⁶⁵ The DOE NOPR nevertheless does not even attempt to reconcile its proposed regulatory retrenchment with clear Congressional and Commission policy preference for competitive markets as reflected in the Energy Policy Acts of 1992 and 2005. This reason alone justifies rejection of the DOE’s proposal.

requirements of this rule shall apply” only to the indicated subset of ISOs/RTOs. However, the ensuing proposed subsection would state that “[e]ach Commission-approved [ISO and RTO] shall establish a tariff” that incorporates the rule’s proposed cost-plus pricing guaranty for “eligible grid reliability and resiliency resources” as the proposed rule defines them. *Id.* (proposed amended version of 18 C.F.R. § 35.28(g)(10)(iii)). For present purposes, PJM interprets “this rule” in proposed subparagraph (g)(10)(ii) to refer to the proposed regulatory language as a whole, and thus to mean that the DOE intends the new rule to apply only in the subset of regions meeting that subparagraph’s criteria. Should PJM be mistaken about the true scope of the proposal, it reserves its right to assert any objections that it may have to the proposal in its full, intended scope, regardless of whether such objections may be additional to or different from those articulated in these comments.

⁶⁴ See *supra* note 4.

⁶⁵ Order No. 888-A at 30,183.

2. *The DOE's Proposal To Guarantee Eligible Resources' Recovery Of All Costs Plus A Return Is Contrary To Law.*

The United States Supreme Court has stated that “regulation does not assure that the regulated business make a profit.”⁶⁶ The Court later added that “[t]he due process clause . . . has not and cannot be applied to insure values or to restore values that have been lost by the operation of economic forces.”⁶⁷ The DOE NOPR, in contrast, would require “pricing to *ensure* that each eligible resource . . . *recovers its fully allocated costs and a fair return on equity*,”⁶⁸ even though the DOE Staff Report acknowledges that displacement of coal-fired and nuclear generation is due in large measure to the persistently low price of natural gas—i.e., the very “economic forces” from which regulation under the FPA does not protect regulated public utilities.⁶⁹ Moreover, the DOE NOPR's generic mandate of cost recovery improperly ignores the well-established rights of states and wholesale customers to challenge the prudence of particular utility costs.

As written, therefore, the DOE NOPR would require the Commission to direct the targeted ISOs/RTOs to provide eligible resources with exactly the kind of assurances of

⁶⁶ *Mkt. St. Ry. Co. v. R.R. Comm'n*, 324 U.S. 548, 566 (1945) (citing *FPC v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944) (“*Hope*”)). *Accord FPC v. Nat. Gas Pipeline Co.*, 315 U.S. 575, 590 (1942) (“[R]egulation does not insure that the business shall produce net revenues . . .”).

⁶⁷ *Mkt. St. Ry. Co.* at 567.

⁶⁸ DOE NOPR at 46,948 (proposed revised text of 18 C.F.R. § 35.28(g)(10)(iii)(B)) (emphasis added). Eliminating all doubt that this language would guaranty cost recovery plus a profit for each eligible resource, the proposal goes on to clarify that “[c]ompensable costs shall include, *but not be limited to*, operating and fuel expenses, costs of capital and debt, and a fair return on equity and investment.” *Id.* (proposed revised text of 18 C.F.R. § 35.28(g)(10)(iv)) (emphasis added).

⁶⁹ *Mkt. St. Ry. Co.* at 567; *see also Associated Gas Distribs. v. FERC*, 824 F.2d 981, 1001 (D.C. Cir. 1987) (“*AGD*”) (observing the Supreme Court’s rulings that “the due process clause affords no protection from losses inflicted by market conditions” (citing *Hope*, 320 U.S. 591; *Mkt. St. Ry. Co.*, 324 U.S. 548)).

profit and protection from market forces to which the Supreme Court long ago held regulated entities are not entitled. Accordingly, the Commission cannot lawfully adopt the DOE's proposal.

3. The DOE NOPR Proposes An Unlawful, Arbitrary and Undue Preference For Eligible Resources.

Like the companion Natural Gas Act, the Federal Power Act “fairly bristles with concern for undue discrimination.”⁷⁰ While not all discrimination is prohibited,⁷¹ discrimination must be “undue” which occurs “when the classes are not similarly situated.”⁷² Courts will accept disparate treatment “if FERC offers a valid reason for the disparity.”⁷³

The DOE NOPR is *unduly* discriminatory and, therefore, unlawful in at least two critical respects. First, it offers no sound basis for the preferential pricing it proposes for eligible resources. Second, it explains no rationale for creating a new pricing regime for eligible resources to apply only in ISO/RTO regions that have capacity and energy markets, while leaving unchanged the jurisdictional rates of all generators (including

⁷⁰ *AGD*, 981 F.2d at 998.

⁷¹ *BP Energy Co. v. FERC*, 828 F.3d 959, 967 (D.C. Cir. 2016) (“No undue discrimination exists where there is ‘a rational basis for treating [two entities] differently’ and such differential treatment is ‘based on relevant, significant facts which are explained.’”(alteration in original) (quoting “*Complex*” *Consol. Edison Co. of N.Y., Inc. v. FERC*, 165 F.3d 992, 1012-13 (D.C. Cir. 1999))).

⁷² *PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,145, at P 109 (2011).

⁷³ *Black Oak Energy, LLC v. FERC*, 725 F.3d 230, 239 (D.C. Cir. 2013) (alteration in original) (internal quotation omitted) (citation omitted). *See also Ark. Elec. Energy Consumers v. FERC*, 290 F.3d 362, 367 (D.C. Cir. 2002) (“A rate is not ‘unduly’ preferential or ‘unreasonably’ discriminatory if the utility can justify the disparate effect.” (quoting *Metro Edison Co. v. FERC*, 595 F.2d 851, 857 (D.C. Cir. 1979))); *Elec. Consumers Res. Council v. FERC*, 747 F.2d 1511, 1515 (D.C. Cir. 1984) (same).

those that otherwise might qualify as eligible resources if located in a targeted ISO/RTO footprint) in all other regions of the nation.

The courts have recognized that it may be reasonable for the Commission to draw distinctions between types or classes of resources for some purposes. PJM's minimum offer price rule⁷⁴ and Capacity Performance⁷⁵ reforms provide two such examples, which underscore the DOE NOPR's critical omission: Unlike the DOE NOPR, in adopting the PJM rules, the Commission provided a sound rationale, supported by substantial evidence, for distinguishing between certain types of resources.

Critically, in support of its proposal, the DOE cites not a single incident or event when the on-site availability of 90 days' fuel supply was or would have been the difference in maintaining reliable electric service in any of the targeted ISO/RTO regions (or anywhere else). Indeed, the DOE NOPR fails to connect its proposed 90-day on-site fuel supply criterion with prevention or mitigation of any outage or other reliability issue in any targeted market at any time. Likewise, the DOE fails to articulate why the problem only exists in RTOs and ISOs with capacity markets.⁷⁶

⁷⁴ The Commission approved applying PJM's minimum offer price rule to natural gas-fueled generators, but not to intermittent renewable resources like wind and solar generation. *See supra* note 72, *PJM Interconnection, L.L.C.*, 113 FERC ¶ 61,145 at PP 109-111, *aff'd sub nom. N.J. Bd. of Pub. Utils. v. FERC*, 744 F.3d 74 (3d Cir. 2014).

⁷⁵ The Commission and the courts accepted PJM's "Capacity Performance" reforms, which limited participation in the PJM capacity market to resources that are capable of providing energy or reducing demand on a year-round basis. *See supra* note 56.

⁷⁶ *See supra* Section II.A.4.

Because the DOE NOPR fails to articulate any rational connection between the facts it marshals, the problem it identifies, and the solution it seeks to inflict, the Commission cannot lawfully adopt it.⁷⁷

4. The Commission's Comment Deadlines Do Not Provide The Meaningful Opportunity To Comment Required By The Administrative Procedure Act.

Section 553(c) of the Administrative Procedure Act requires an agency, after publishing notice of a proposed rule, to “give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments.”⁷⁸ The purposes of these procedural requirements are to “assure[] fairness and mature consideration of rules having a substantial impact on those regulated,”⁷⁹ and to “educate[] the agency, thereby helping to ensure informed agency decisionmaking.”⁸⁰ These objectives dictate that an agency must provide a “meaningful opportunity” to comment.⁸¹ Therefore, according to the drafters of the Act, matters “of great importance, or those

⁷⁷ *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (stating that an agency must articulate “a ‘rational’ connection between the facts found and the choice made” (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962))).

⁷⁸ 5 U.S.C. § 553(c).

⁷⁹ *Pennzoil Co. v. FERC*, 645 F.2d 360, 371 (5th Cir. 1971).

⁸⁰ *Chocolate Mfrs. Ass'n v. Block*, 755 F.2d 1098, 1103 (4th Cir. 1985); *see also Nat'l Tour Brokers Ass'n v. United States*, 591 F.2d 896, 902 (D.C. Cir. 1978) (explaining that the purpose of the notice-and-comment procedure is “to allow the agency to benefit from the experience and input of the parties who file comments . . . and . . . to see to it that the agency maintains a flexible and open-minded attitude towards its own rules.”); *N.C. Growers' Ass'n, Inc. v. United Farm Workers*, 702 F.3d 755, 763 (4th Cir. 2012) (“The important purposes of this notice and comment procedure cannot be overstated. The agency benefits from the experience and input of comments by the public, which help ‘ensure informed agency decisionmaking.’” (quoting *Spartan Radiocasting Co. v. FCC*, 619 F.2d 314, 321 (4th Cir. 1980))).

⁸¹ *Prometheus Radio Project v. FCC*, 652 F.3d 431, 450 (3^d Cir. 2011) (quoting *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095, 1101 (D.C. Cir. 2009)).

where the public submission of facts will be either useful to the agency or a protection to the public, should naturally be accorded more elaborate public procedures.”⁸²

The DOE proposes nothing less than for the Commission to reverse two decades of resolute reliance on market forces to ensure just and reasonable wholesale prices for electricity—a bedrock policy which, as the Commission has observed on a variety of occasions, Congress first encouraged and later ratified. The Commission’s own staff has published an extensive (though certainly not billed as exhaustive) list of questions and issues that the DOE NOPR presents, but does not address.⁸³ Nevertheless, interested parties were given a mere 13 days to comment after the DOE NOPR was published in the Federal Register.

The courts strictly enforce the APA’s procedural steps, and a comment period of “exceedingly short duration” will support a finding that an agency has failed to offer the public a meaningful opportunity to comment on a proposed rule.⁸⁴ The “instances actually warranting” a comment period as brief as the Commission is permitting here “will be rare,” and “are generally characterized by the presence of exigent circumstances in which agency action [is] required in a mere matter of days.”⁸⁵ When considered in the light of the import, scope, and potential costs to consumers of the DOE’s proposal, the DOE NOPR fails utterly to justify the extremely expedited schedule the Commission has

⁸² Administrative Procedure Act: Legislative History, S. Doc. No. 79-248, at 259 (2d Sess. 1946); Charles H. Koch Jr., 1 Administrative Law and Practice 329-30 (2010 ed.).

⁸³ *Grid Reliability and Resilience Pricing*, Letter Requesting Information, Docket No. RM18-1-000 (Oct. 4, 2017).

⁸⁴ *N.C. Growers Ass’n, Inc.*, 755 F.2d at 763, 770.

⁸⁵ *N.C. Growers Ass’n, Inc.*, 755 F.2d at 770 (citations omitted).

established, resulting in a procedural schedule that plainly falls short of the APA's minimum requirements.

III. ALTHOUGH THE LACK OF BASIS FOR THE DOE NOPR AND THE ILLEGAL REFORMS IT PROPOSES SUPPORT NOT IMPLEMENTING THE PROPOSAL, PJM BELIEVES THE AUGUST DOE REPORT APPROPRIATELY HIGHLIGHTED A PROBLEM PJM IS FACING WITH PRICE FORMATION THAT SHOULD BE ADDRESSED THROUGH REFORMS TO BE SUBMITTED TO THE COMMISSION WITHIN A COMMISSION-DIRECTED TIME FRAME

A. The Need for Targeted Consideration of This Change in the PJM Region

PJM notes at the outset that the DOE NOPR itself has directed its reforms solely to regions with energy and capacity markets. Further, given its focus on coal and nuclear units, it is clear that the region to which the DOE most directs its remedy is the PJM Region since the PJM Region has an abundance of coal and nuclear units still in service.⁸⁶ Thus, the DOE has already 'carved out' the PJM region for special recognition by the Commission. Although PJM disputes the rationale supporting the DOE's NOPR, the DOE's recognition of the need for targeted action in PJM is one with which PJM concurs.

1. PJM has Observed and Adapted to Significant Market Changes in Recent Years.

PJM's markets are resource agnostic, and have evolved over the years to include a variety of resource types including coal, natural gas steam, natural gas combustion turbine, oil steam, oil combustion turbine, nuclear, solar, wind, hydroelectric, battery/storage, and demand response. In recent years, the industry has experienced a significant fuel and technology shift to natural gas and renewable resources, prompted by

⁸⁶ See *supra* Figure 3.

low-cost shale gas, the efficiency improvements of combined-cycle gas turbines, and the improving economics of renewable energy driven in part by government incentives. Between 2010 and 2016, coal resources comprised 79 percent of the capacity retired in PJM,⁸⁷ and natural gas and renewable resources comprised 87 percent of the new capacity in PJM.⁸⁸ By 2016, PJM's installed capacity consisted of 33 percent coal, 33 percent natural gas, 18 percent nuclear, and 6 percent renewables (including hydro).⁸⁹

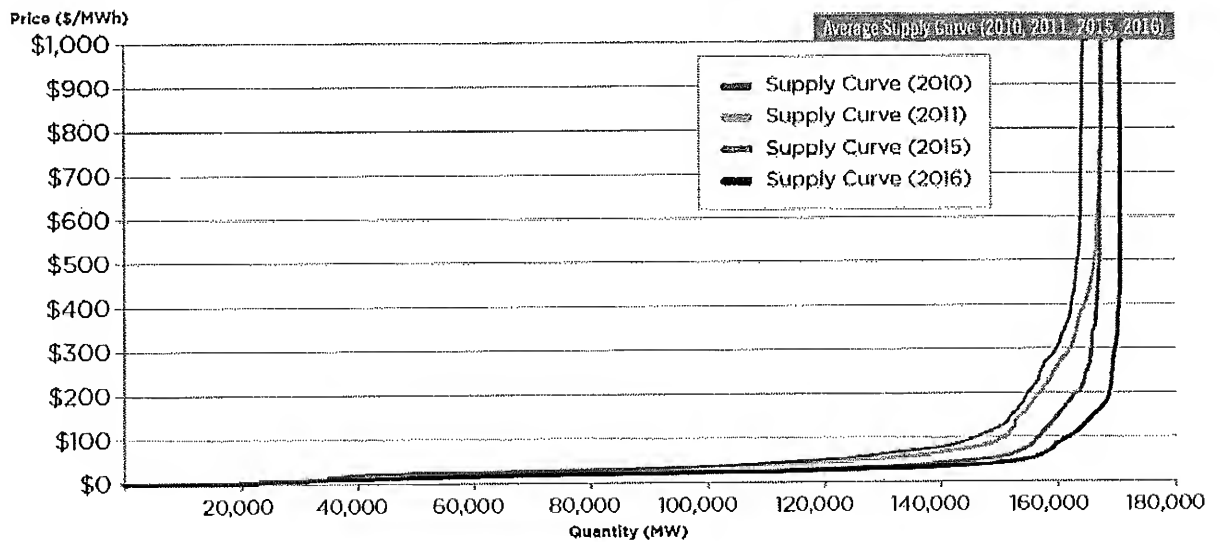
PJM points out the following signs that the current environment is an opportune time to examine whether prices in the PJM energy market are formed as efficiently as possible. First, the competitive economics of combined-cycle gas turbines, assisted by low-cost shale gas and increasing renewables with zero fuel costs, has led to steadily flattening supply curves (Figure 4). The impact of this trend is particularly strong from 120,000 megawatts to 150,000 megawatts of load, the range in which peak load levels typically occur in the summer and winter. As Figure 4 shows, in 2015 and 2016 the supply curve remained relatively flat throughout this range, never reaching the point at which supply prices begin to increase significantly.

⁸⁷ See *Generation Activation Summary Sheets*, PJM Interconnection, L.L.C., <http://www.pjm.com/planning/generation-deactivation/gd-summaries.aspx> (last visited Oct. 23, 2017).

⁸⁸ See *PJM Generation Queues: Active (ISA, WMPA, etc.)*, PJM Interconnection, L.L.C. (Oct. 22, 2017, 11:35 a.m.), <http://www.pjm.com/planning/generation-interconnection/generation-queue-active.aspx>. Queue project megawatts are based on "MW placed in service" with Status Codes of IS, UC-ISP, or Active-ISP, and represent the new generation capability added to the system. Actual capacity interconnection rights may be lower based on limitations for certain fuel types or rights as specified in individual interconnection agreements.

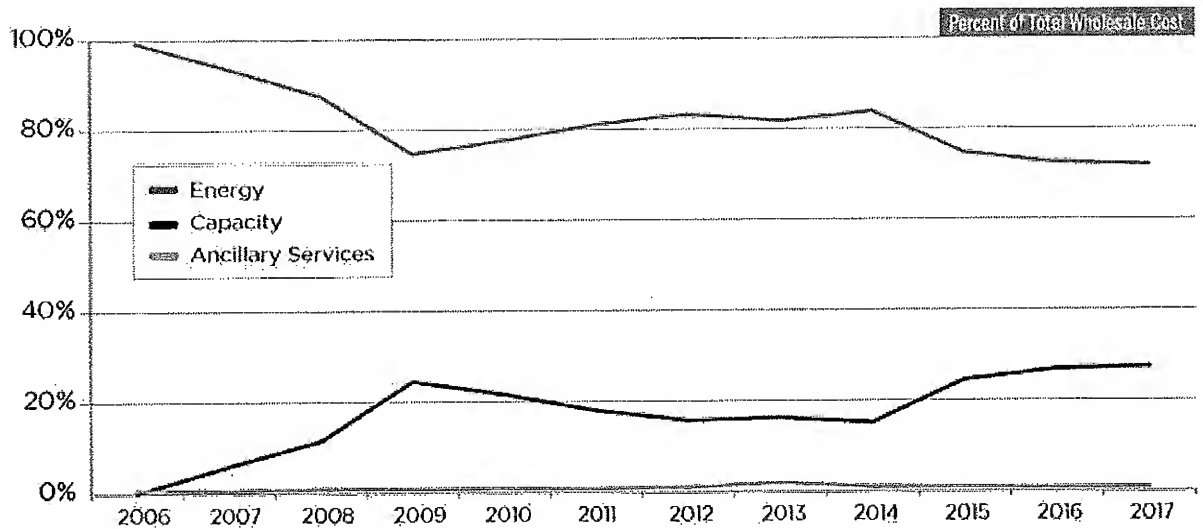
⁸⁹ See PJM Interconnection, L.L.C., <http://www.pjm.com/~media/markets-ops/ops-analysis/capacity-by-fuel-type-2016.ashx> (last visited Oct. 23, 2017).

Figure 4. Average Supply Curves (2010, 2011, 2015, and 2016)



Also, as energy market revenues in PJM have declined, capacity market revenues have played a more significant role in generators' total revenues. (Figure 5).⁹⁰

Figure 5. Revenue Segments



⁹⁰ Revenues from the energy and capacity markets were 74.3 percent and 22.9 percent, respectively, of the total generation revenue in 2015, and 71.1 percent and 26.6 percent, respectively, in 2016. The total payments for ancillary services represent 2.8 percent of the total generation revenue in 2015 and 2.3 percent in 2016.

To the extent that these phenomena are strictly the result of supply and demand fundamentals, there would be no problem to be resolved. However, upon observance of these trends, PJM has endeavored to research whether energy market prices are accurately reflecting the value of the resources being utilized to maintain system reliability, both from the standpoint of meeting system demand as well as providing the flexibility the system operator needs to meet constantly changing conditions. Improved price formation will result in a better, more transparent reflection of the marginal resources on the system as well as create incentives for units to follow dispatch instructions and to make their units more flexible to respond to changing load demands. In general, improved price formation, as discussed more fully below, may help to ensure an appropriate mix of resources that can meet future grid demands and have clear incentives to follow dispatch instructions.

2. *The Problems PJM is Experiencing as a Result of Such Changes can be Addressed through Price Formation Reforms in PJM.*

In the case of the need for price formation reforms, the Commission should note the following characteristics which identify the PJM region as eligible for prompt remedy of the particular price formation problem noted above.

For instance, in light of the reforms to PJM's capacity market in moving to the Capacity Performance construct, reliability pricing has supplemented energy pricing to help attract efficient resource investment to meet the resource adequacy needs. However, beyond the aggregate resource attributes such as maximum economic generation and forced outage rate, the capacity market is not intended to reward flexibility attributes such as short starting time, short minimum running time, low minimum economic generation and fast ramping rate that are essential to efficiently meet operational needs.

As the availability of an appropriate mix of these flexibility attributes is essential for reliable system operation, the value of flexibility should be appropriately reflected in energy and reserve market pricing to incent the attributes needed to maintain system reliability efficiently. Going forward, this is particularly important because of, among other things, the anticipated continuing increase in distributed, intermittent resources and demand response coming on to the PJM system.

PJM believes that price formation reforms in PJM should ensure that efficient commitment and dispatch solutions are supported by efficient prices and settlement with reduced uplift and improved incentives are accomplished in ways that will be more consistent with several other ISOs/RTOs, including its neighbors MISO and NYISO that have adopted energy pricing enhancements previously and will lessen the seams issue.

Another characteristic of PJM which identifies the PJM region as eligible for prompt remedy is that, as PJM noted in its comments in response to the Commission's Fast Start Pricing NOPR,⁹¹ PJM has not yet adopted the level of reforms as other regions with respect to fast-start pricing. Other regions have already experienced the benefit of more flexible pricing methods whereas PJM has yet to make similar enhancements. Additionally, given the demographics of PJM's fleet such as the significant penetration of relatively large combined cycle natural gas units, PJM feels that an expansion is necessary to fully address price formation in PJM. Simply, PJM does not have many

⁹¹ See *Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice of Proposed Rulemaking, at P 54 (2016) ("Fast Start Pricing NOPR").

units that meet the FERC definition of “fast-start” and therefore PJM needs a broader approach that allows for regional differences.⁹²

PJM believes that the confluence of the conditions described above drives the need for a reform to certain aspects of price formation in the PJM region. The goal is to ensure price signals that foster efficient resource-investment decisions and enable participation of demand response (both energy and reserves), variable energy resources, and distributed energy resources. Efficient energy and reserve price formation, under both shortage and non-shortage conditions, would more accurately and transparently value all of the resources on the system that are needed to reliably serve load. Enhancing energy market price formation represents a beneficial and essential first step. PJM has explained its conceptual proposal to address price formation to Dr. William Hogan, Ph.D., described below. In a letter to PJM, Dr. Hogan expressed his concurrence stating:

PJM staff is proposing to reform the existing pricing model in order to ensure that the cost of serving load is reflected in LMP to the fullest extent possible, uplift is reduced and incentives are maintained. This follows the principles of sound market design. Enhanced energy market price signals will strengthen performance incentives in PJM’s markets and is complementary to other reforms being considered by PJM. Given my knowledge of the PJM resource profile, this reform would be an appropriate step forward in price formation for the PJM region.⁹³

While enhancements to the LMP calculation in these other ISOs/RTOs have focused on fast-start resources, PJM believes it needs to enhance price formation as it

⁹² PJM Interconnection, L.L.C. Comments to Notice of Proposed Rulemaking, Docket No. RM17-3-000, at 4 (Feb. 28, 2017).

⁹³ Letter to Mr. Stu Bresler, Sr. Vice President Operations & Markets, PJM Interconnection, L.L.C. from William W. Hogan, RE: PJM Price Formation, October 23, 2017, included as Appendix B.

relates to all resource types. PJM's resource mix is different than other regions. In particular, natural gas resources in PJM are not limited to fast-start combustion turbines, but rather are represented by significant quantities of larger, combined cycle units. These resources are competing directly with other resource types, and it therefore does not make sense to limit the price-setting contribution discussed here to only the fast-start class of units, but rather to enhance price formation such that it is neutral to fuel source or resource class such that all units have the opportunity to compete comparably.

Identification of the need for price formation reforms will not create new seams issues between PJM and its neighbors. For one, MISO and PJM already depart from how prices are formed with MISO utilizing its ELMP method. By the same token, New York does currently employ a hybrid-pricing methodology that appropriately allows inflexible resources to set prices in their region when needed. These differences in pricing practices have not inhibited efficient coordination on the seams and have not resulted in any reliability concerns. Further, neither of those regional changes have inhibited the free flow of energy across the various borders PJM has with its neighbors. The RTOs have worked hard to address those seams issues over the years. The mere existence of different pricing regimes is already inherent in the Commission's deference to regional solutions. To now use this as a sword to thwart an individual region's initiatives will drive the nation to a 'lowest common denominator' solution which serves no region well in the long run.

B. PJM is Setting Forth a Framework for Price Formation Reforms Needed in the PJM Region in the Near Term.

PJM describes herein price formation reforms it is considering to address the problems identified above in the near term. The framework below explains the issue in terms of convexity and non-convexity, in recognition of a technical condition that is essential to addressing the concerns raised with inflexibility. In basic terms, PJM finds itself increasingly in a state of non-convexity which in turn requires payments be made to resources outside of LMP through make whole payments which in turn has led to increased uplift, reducing incentives for flexibility. PJM proposes a way in which such uplift can be minimized.

1. Marginal Cost Pricing and the Convex Condition

Fundamentally, energy price formation is built on the foundation of marginal cost pricing. Marginal cost pricing means that the price is set equal to the incremental cost to produce the last unit of output or, equivalently, the potential increase in system cost if the last-cleared competitive unit were unavailable to serve the demand. In principle, marginal cost pricing enables full cost recovery in competitive markets under the “convex condition.” The convex condition means that the incremental cost of production rises when a generating unit’s output increases, and declines when a generating unit’s output decreases. Under the convex condition, the last-cleared unit is always the highest-ranking unit in the merit order with the highest cost. The optimal strategy under the convex condition is for each generating unit to bid its true costs and physical characteristics.

An inflexible generating unit with a minimum operational limit fails the convex condition because when the output decreases below the minimum operational limit, the cost rises, making it uneconomical to run the unit in that range.⁹⁴ Under non-convex conditions, producers may incur losses if the price is set at marginal cost. Fundamentally, in the presence of non-convexity, there are no market prices that can support competitive market solutions without requiring additional payments through, for example, make whole payments and resulting uplift mechanisms. In wholesale electricity markets with LMP, two different LMP pricing methods have been used to support competitive market solutions under the condition of non-convexity: the restricted LMP method and the extended LMP method.

a. Current LMP Method

The current LMP method was chosen for the initial implementation of the PJM energy market primarily because of its simplicity. The current LMP method ignores the presence of non-convexity in its price-setting logic and assumes that certain units, or certain output ranges of units, are ineligible to set price when they fail the convex condition. It employs a single security-constrained economic dispatch (“SCED”) model for both dispatch and pricing purposes. In the SCED model, only flexible units are eligible to set price, and the costs for inflexible units are excluded in the pricing run, calculating the marginal system costs and determining the market clearing prices.⁹⁵

⁹⁴ In electricity markets, non-convexity also arises for other technical reasons, such as fixed start-up/no-load costs, economies of scale and inflexibilities such as minimum-generation or block-loading requirements.

⁹⁵ FERC recently sought to address the ability of inflexible fast-start units in the Fast-Start Pricing NOPR. FERC’s proposal would require the dispatch and pricing of the system to be done separately so that inflexible fast-start units could be made flexible in order to set prices. FERC’s proposal also sought to include startup and no load for these resources in pricing.

As a result, there have always been circumstances where prices could fail to reflect all elements relevant to sending the right market signals. Specifically, when certain inflexible units are required to serve load but ineligible to set price, and the current LMP method inappropriately lowers energy prices, an uplift payment to the inflexible units is required in order to ensure that their costs are fully recovered. These uplift payments are detrimental to the overall operation of the market because market participants that must pay these costs are unable to predict or hedge against them.

Significant effort has been invested in minimizing these uplift costs over time, including putting limitations on the physical parameters that generating units may submit as part of their offers into the market. However, efficient dispatch processes can only minimize the resulting uplift so much. PJM has been required to create rules to limit physical parameters over the years due to the incentives created by the uplift payments. Currently, resource operators have the incentive to make units as inflexible as possible while still being committed by PJM in order to maximize the uplift payments they can collect.

b. Extended LMP Method

PJM is actively exploring a transition to the extended LMP method.⁹⁶ In the extended LMP method, the conditions that cause non-convexities are relaxed in a pricing run executed separately from the dispatch run in a procedure known as convex relaxation. A dispatched inflexible unit needed to serve load would be treated like a flexible unit and be allowed to set price. Prices that reflect the incremental costs of the most expensive

⁹⁶ For a description of the extended LMP method, see Gribik, P. R., W. W. Hogan, and S. L. Pope, *Market-Clearing Electricity Prices and Energy Uplift*, John F. Kennedy School of Government, Harvard University (2007).

units needed to serve load benefit supply resources with lower costs, making offers from flexible or inflexible units competitive. As a beneficial result, the extended LMP method effectively rewards flexibility, reducing reliance on the uplift payments with improved price signals that incent resource performance in market operations. These incentives will be necessary in the future, as the PJM system continues to experience further penetration of intermittent resources.

A defining characteristic of the extended LMP method is that it bifurcates the SCED model into two separate runs: the dispatch run and the pricing run.⁹⁷ This bifurcation already occurs in regions such as MISO, ISONE, and NYISO who all have a sophisticated procedures for fast-start pricing. In the method PJM is investigating, the dispatch run is the same as in the current LMP method and the pricing run is a convex relaxation of the SCED dispatch run. In the pricing run, the inflexible generation units compete with the flexible units and are eligible to set the energy price when they are needed to meet the demand or control transmission constraints. With appropriately designed uplift payments, extended LMP can support efficient commitment and dispatch solutions, because market participants should have no incentive to deviate from the solution and (to a large extent) have no incentive to submit offers that differ from their true costs. The Commission has already shown its comfort with different price setting methods given that both of these price setting methods are in place.⁹⁸

⁹⁷ See *supra* note 96.

⁹⁸ *Midwest Independent Transmission System Operator, Inc.*, 140 FERC ¶ 61,067 (2012).

2. Shortage Pricing

In addition to exploring a more robust method to determine LMPs, PJM also believes that reforms to its shortage pricing rules would benefit price formation and incentivize appropriate behavior that could mitigate operational reliability concerns. Currently, PJM implements shortage pricing if its system is short of 10-minute reserves, which from a reliability perspective would constitute a grave operating condition. Ideally, the market should appropriately incentivize activity to avoid these occurrences. However, once in that condition, market prices should reflect the severity of the condition. Modeling and invoking shortage pricing for longer-term reserve products such as 30-minute reserves would provide better incentives and information to the market regarding potentially severe operating conditions by escalating energy and reserve prices earlier and incentivizing behavior that would ameliorate the condition.

Further, PJM is examining the level and shape of its operating reserve demand curves ("ORDC"). The current ORDCs used in PJM are step functions that are based on PJM's nominal reserve requirement, which is a function of the largest unit operating on the system. As such, they do not accurately reflect the value of excess reserves on the system in a manner consistent with the reliability value of those reserves. PJM also is investigating the penalty factor levels associated with these curves to ensure they accurately reflect the value that reserves provide to the system under all operating conditions. While PJM recently made incremental changes to its ORDCs, a wholesale review of these curves has not been done since PJM implemented shortage pricing in 2012. To ensure PJM comprehensively addresses all facets of price formation, and

considering potential changes to the LMP methodology and reserve products considered for shortage pricing, now is also an appropriate time to review shortage pricing in PJM.

C. PJM Suggests a Focused Commission Process.

As explained herein, the Commission should act now to ensure that essential reliability services that resources provide are maintained. Reforms are needed in PJM now to ensure that (i) the cost of serving load is reflected in LMP to the fullest extent possible, (ii) uplift is reduced and (iii) proper economic incentives are maintained. Enhanced energy market price signals will strengthen performance incentives in PJM's markets and is in line with other reforms being considered by PJM. PJM understands not all regions face the same need for action. An extensive record has been developed to date in this area in the Commission's price formation proceedings, as confirmed by the August DOE Report. Thus, to move forward, the Commission should direct each RTO/ISO to identify for the Commission whether changes in the resource mix has created issues in their respective regions that are currently not addressed in the market. If any issues exist, the RTO/ISO should prioritize the issues of most consequence to that region and provide, within a Commission-specified deadline that is in the near term, for the submission of proposals, if necessary. In the alternative, the Commission could expand the scope of its existing open price formation NOPRs to provide for regional solutions around the issues it has broadly identified in those dockets.

IV. CONCLUSION

For the foregoing reasons, PJM respectfully requests that the Commission decline to adopt the DOE NOPR (as unsupported) and, in its place, issue an order as discussed herein.

Respectfully submitted,

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October 23, 2017

APPENDIX A
to
PJM COMMENTS IN RM18-1-000
OCTOBER 23, 2017

APPENDIX A

PJM'S RESPONSES TO SPECIFIC QUESTIONS RAISED BY OEPI IN DOCKET NO. RM18-1-000

I. Need for Reform

Question 1

What is resilience, how is it measured, and how is it different from reliability? What levels of resilience and reliability are appropriate? How are reliability and resilience valued, or not valued, inside RTOs/ISOs? Do RTO/ISO energy and/or capacity markets properly value reliability and resilience? What resources can address reliability and resilience, and in what ways?

PJM Response

For PJM, resilience means the ability to prepare, operate through, and recover from high-impact, low-frequency threats such as extreme weather, electromagnetic pulses, geomagnetic disturbances, earthquakes, cyber and physical attacks, and fuel security limitations.¹ PJM defines the three elements of resilience as:

- Prepare – evaluating and cost-effectively mitigating risks
- Operate – managing through a high-impact disruption
- Recover – regaining essential functions as rapidly as possible

Resilience requires coordinated efforts with operations, transmission and infrastructure planning, business continuity, cyber and physical security, risk management and markets.

PJM is required to plan for and operate transmission system in a manner that meets the mandatory reliability standards under the section 215 of the Federal Power Act, 16 U.S.C. section 824o, as developed and proposed by the North American Electric Reliability Corporation (“NERC”) and accepted by the Commission. These standards address all aspects of reliability including Resource and Demand Balancing, Critical Infrastructure Protection, Communications, Emergency Preparedness and Operations, Facilities Design, Connection, and Maintenance, Interchange Scheduling and Coordination, Interconnection Reliability Operations and Coordination, Modeling, Data, and Analysis, Nuclear, Personnel Performance, Training and Qualifications, Protection and Control, Transmission Operations, Transmission Planning, and Voltage and Reactive. “Reliable operation” is defined under the FPA as:

¹ Industry groups have similar definitions. See, e.g., the North American Transmission Forum in September 2017 paper on transmission system resilience which can be found at the following URL:
<http://www.natf.net/docs/natf/documents/resources/transmission-system-resiliency-an-overview.pdf>.

operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.²

The PJM system meets existing standards of reliability.

Resilience addresses challenges and emerging risks *that reliability standards do not address* in order to withstand a prolonged, large-scale outage. Resilience for the bulk-electric system entails:

- Maintaining reliability in the face of significant events
- Incorporating high-impact, low-frequency threats into planning and procedures
- Slowing disruptive events, mitigating their impacts and quickly recovering essential functions
- Protecting essential systems based on assessed risks and hazards
- Improving grid flexibility and control to be able to adapt efficiently and quickly to changed conditions

As discussed in the body of PJM's response³ PJM regularly considers factors that could impact the reliability and resilience of the PJM system. Further, PJM and its stakeholders are continuing to examine resilience-related low-probability and high-impact events that could cause reliability impacts to the PJM system.

Given the changing nature of the fleet and a new set of threats that were not anticipated under the current NERC standards, prudent planning and operations requires the anticipation and mitigation of potential future occurrence of events, such as:

- sustained supply-chain issues
- environmental restrictions that limit operations of an entire fleet of fossil generators
- a nuclear disaster, which causes regulatory reaction for new and existing nuclear fleet
- a single incident causing major, multiple pipeline or supply disruptions for the natural gas fleet or oil fleet
- a major impact to a large portion of the transmission infrastructure that forces an outage lasting for days, such as a major natural disaster that impacts large sections of grid including resources and the infrastructure that connects the resources to consumers

² 16 U.S.C. § 824(a)(4) (2010).

³ PJM Comments at sections II.A.2 and 3.

To that end, PJM has created a Resilience Roadmap⁴ to use in exploring opportunities with its stakeholders, through the stakeholder committees, for addressing resilience. This includes review resilience opportunities from the perspective of transmission planning, operations, including gas/electric coordination and fuel security, markets, and cyber and physical security. Detailed discussions of these efforts are held at the Operating Committee, the Markets and Implementation Committee and/or the Planning Committee, as appropriate. And, to further collaboration with a variety of government and industry stakeholders, PJM is increasing its emphasis on cross-sector coordination.

Given the early stages of this collaboration, the next steps for PJM and stakeholders include defining metrics for resilience and criteria for evaluating potential mitigating actions not limited to generation as was the focus of the DOE NOPR, but rather also to include transmission, operations, cyber and physical security, and advanced system restoration.

Question 2

The proposed rule references the events of the 2014 Polar Vortex, citing the event as an example of the need for the proposed reform. Do commenters agree? Were the changes both operationally and to the RTO/ISO markets in response to these events effective in addressing issues identified during the 2014 Polar Vortex?

PJM Response

As described more fully in the body of PJM's comments,⁵ there is no valid basis for the proposed reform, including the 2014 Polar Vortex or any other extreme weather events cited. Indeed, NERC's Polar Vortex Review found:

Extreme cold weather also had a major impact on generator equipment. Of the approximately 19,500 MW of capacity lost due to cold weather conditions, over 17,700 MW was due to frozen equipment. Many outages, including a number of those in the southeastern United States, were the result of temperatures that fell below the plant's design basis for cold weather. At the height of generation outages (January 7 at 0800) the southeastern United States accounted for approximately 9,800 MW of the outages attributed to cold weather.⁶

⁴ The Resilience Roadmap can be found at the following URL: <http://pjm.com/~media/committees-groups/committees/oc/20170606/20170606-item-18-resilience-roadmap.ashx>.

⁵ PJM Comments at sections II.A, B, and C.

⁶ NERC Polar Vortex Review – 2014 at 12. The report can be found at the following URL: http://www.nerc.com/pa/trm/January%202014%20Polar%20Vortex%20Review/Polar_Vortex_Review_29_Sept_2014_Final.pdf.

And, of the generation that was lost due to fuel supply, all generation resource types, with the exception of wind and demand response, performed poorly. PJM explained to the Commission that at the time of the peak demand hour on January 7:

- approximately 22 percent of total installed generation capacity in PJM (of all fuel types) was unavailable because of forced outages associated with routine equipment breakdowns, problems related to operating in extreme cold temperatures and, fuel-supply issues.
- gas interruptions were *not* the major driver of the high forced outage rates experienced in the PJM region.
- Natural gas interruptions removed less than five percent of the total capacity required to meet demand on January 7
- Equipment issues associated with both coal and natural gas units made up the far greater proportion of forced outages⁷

To be sure, the 2014 Polar Vortex exposed some electric industry vulnerabilities associated with the transportation of natural gas to generators in the PJM region. This is a work in progress.

PJM has taken a number of actions since the 2014 Polar Vortex to improve generation performance, many of which were implemented by winter of 2015 and did result in a reduction in total forced outages of 15,395MWs (38.3%) on the two dates shown in Figure 1 below under similar temperature, weather and system loads.

⁷ *Winter 2013-2014 Operations and Market Performance in Regional Transmission Organizations and Independent System Operators*, Statement of Michael J. Kormos Executive Vice President – Operations, PJM Interconnection, L.L.C. at 3-4, Docket No. AD14-8-000 (May 15, 2014) (“Kormos Statement”).

Figure 1: Comparison of Outages by Primary Fuel⁸

Figure 19. Outages by Primary Fuel Feb. 20, 2015

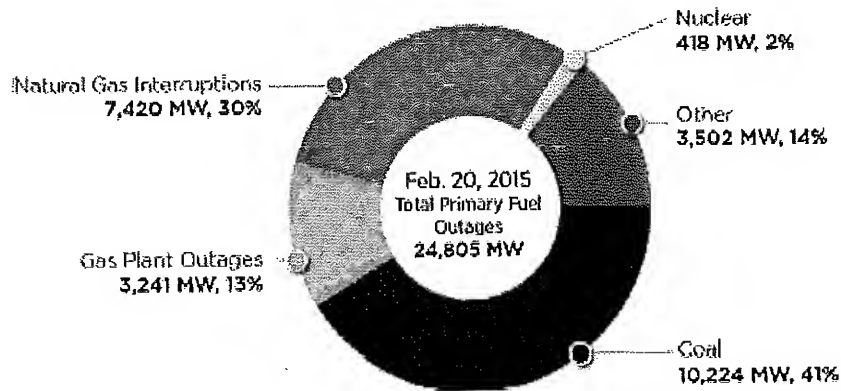
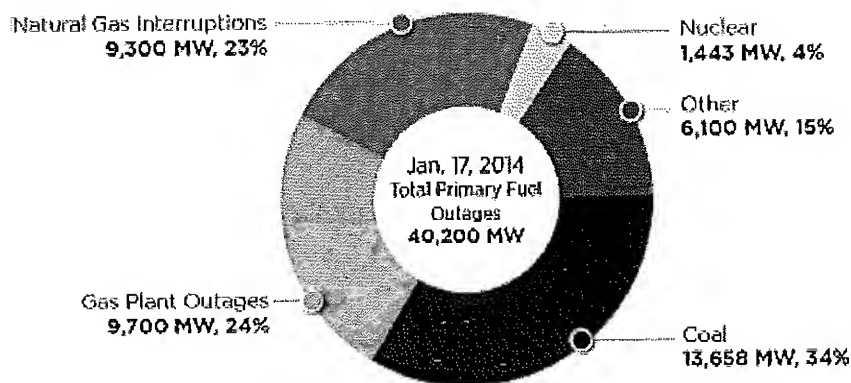


Figure 20. Outages by Primary Fuel Jan. 7, 2014



Changes implemented in advance of the 2015 winter included:

- Development of a Cold Weather Preparation Guideline and Checklist.
 - Utilized annually to prepare generators for extreme cold weather
 - PJM Manual 14D: Attachment N
- Implementation of the Generation Resource Operational Exercise.

⁸ See *2015 Winter Report* at 21 (May 13, 2015) which can be found at <http://pjm.com/-/media/library/reports-notices/weather-related/20150513-2015-winter-report.ashx?la=en>.

- PJM identifies units that did not operate, or operate on its alternate fuel, in the 8 weeks prior to Nov 1st, and also on a rolling two week basis through mid-December, and will schedule a test of the unit to ensure operability on either the primary or alternate fuel.
- PJM also provides cost recovery for the tests for any non-Capacity Performance units.
- Improved generator fuel supply surveys with enhanced focus on fuel supply and emissions limitations.
- Improved gas-electric coordination including secure data exchange with information sharing of pipeline restrictions and gas fired generation nominations in the day ahead market.
- Improved tools for better situational awareness with a geographic information system including gas pipelines and associated generation and locational visibility to curtailable load in the Dispatch Interactive Mapping application.

These actions by PJM as well as the generation owners to improve generator performance and communications were effective in reducing generator outages. In many cases however, these actions are voluntary and thus PJM has taken other steps to improve performance.

For instance, PJM evolved its capacity market to the Capacity Performance construct which is aimed at incentivizing performance not by proscribing specific requirements for each fuel type, but, rather, incentivize better performance in a resource-neutral way. Through stricter performance requirements, incentives and charges for non-performance, Capacity Performance holds capacity resources accountable to make the necessary investments and operational improvements required to ensure delivery of energy when needed most. These investments include not only firming fuel supply, and investing in dual-fuel capability (which combines back-up oil fuel with primary natural gas fuel), but also will also provide incentive to make investments to ensure the generator equipment itself will perform better under extreme cold (more insulators, heaters, etc.), increased staffing, capital investments for better operational flexibility, and cold-weather testing on alternate fuels. These investments are based on risks to performance that a resource can anticipate, plan for, budget for and implement.

Another area in which PJM has made improvements relates to the operating challenges that the daily market timing differences in the two industries pose for generators scheduling gas. In effect, gas delivery to generators begins ten hours after PJM's operating day begins at midnight. Generators must straddle two consecutive gas operating days to cover one electric operating day, thus complicating gas procurement for generation. To mitigate this operational challenge and at the direction of the Commission in Order No. 809,⁹ PJM changed the timing of the Day-Ahead

⁹ *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*, Final Rule, 151 FERC ¶ 61,049 (2015).

Market to better align with the natural gas pipelines' nomination timelines. Under the new schedule, PJM posts Day-Ahead Market results by no later than 1:30 p.m. eastern, which is in advance of a new 2 p.m. eastern Timely Nomination cycle deadline for generators to procure the delivery of natural gas to their units. These changes went into effect on April 1, 2016.

As a result of the described changes, PJM believes it is well prepared for an extreme winter event.

Question 3

The proposed rule also references the impacts of other extreme weather events, specifically hurricanes Irma, Harvey, Maria, and superstorm Sandy. Do commenters agree with the proposed rule's characterization of these events? For extreme events like hurricanes, earthquakes, terrorist attacks, or geomagnetic disturbances, what impact would the proposed rule have on the time required for system restoration, particularly if there is associated severe damage to the transmission or distribution system?

PJM Response

As explained in more detail in the body of PJM's comments¹⁰ PJM does not agree with the proposed rule's characterization of the listed weather events. To the contrary, extreme weather events impact distribution and in some cases transmission much more readily than generation resources' operational failures or lack of fuel supply. And, as a result of the impacts to the transmission and distribution systems, generation resources typically are rendered undeliverable during and immediately following such weather events, regardless of the status of the resource itself.

This point is supported by NERC's "Hurricane Sandy Event Analysis Report," which evaluated the storm's impact on the bulk power system, including both generation and transmission assets. NERC found that "[w]hile there was sufficient generation capacity available to meet the load as restoration progressed; there were some cases where customer restoration was hindered by local area transmission outages."¹¹ NERC's evaluation found that "[o]ver the course of the event, 20,007 MW of generation capacity was rendered unavailable,"¹² including what

¹⁰ PJM Comments at section II.A.

¹¹ *Hurricane Sandy Event Analysis Report*, North American Electric Reliability Corporation at 5 (Jan. 2014), <http://www.nerc.com/pa/rrm/ea/Oct2012HurricaneSandyEventAnalysisRptDL/> ("NERC Hurricane Sandy Report").

¹² *Id.*

DOE calls “fuel secure” nuclear, coal, and other fossil fuel resources.¹³ The same can be said with respect to the devastation caused by hurricane Maria, where roughly 80% of the transmission system in Puerto Rico is above ground, and they lost approximately 75% percent of that infrastructure (in other words, 60% of all their transmission towers/lines were knocked down). As far as distribution goes, the loss was higher with about 85% of all lines/pole damaged or destroyed. The lead time associated with getting those pieces back is the true reason behind the length of this outage. Capacity was available within 72 hours of the event (and still is), but they can’t get it connected to load.

Another factor that underscores the lack of basis concerning the DOE NOPR is that coastal nuclear facilities located in the PJM Region adhere to varying protocols whereby they may choose to shut down when sustained high winds, in some cases as low as 42 MPH, are expected.

Question 4

The proposed rule references the retirement of coal and nuclear resources and a concern from Congress about the potential further loss of valuable generation resources as a basis for action. What impact has the retirement of these resources had on reliability and resilience in RTOs/ISOs to date? What impact on reliability and resilience in RTOs/ISOs can be anticipated under current market constructs?

PJM Response

Resource diversity is a valid topic of study, and PJM regularly examines the potential reliability impacts of a changing resource mix, including impacts associated with coal plant retirements driven by the high compliance costs of the United States Environmental Protection Agency’s Mercury and Air Toxics Standards. As discussed above, the retirement of those resources has had no significant impact on reliability as defined by the relevant NERC criteria, and PJM has not identified the retirement of coal and nuclear resources as a material reliability concern under current market constructs. As discussed in the Evolving Resource Mix and Reliability Report, PJM can operate reliably at much higher levels of natural gas and renewables, and much lower levels of coal and nuclear. PJM’s analysis revealed that operational reliability would be maintained even if all coal and nuclear resources in the expected near-term portfolio retire, and are replaced exclusively by natural gas.¹⁴

¹³ NERC also identified “[s]everal generation operation risks” from the storm, including: (1) increased potential for Loss of Off-site Power to nuclear facilities; (2) possibility of LOOP due to switchyard damage, or loss of normal condenser cooling and loss of availability of service water due to high water; (3) precipitator fly ash buildup and higher gas flow pressure due to operating without auxiliary feeds; (4) curtailments due to wet coal, which is normal with any significant precipitation; (5) danger from the loss of building siding; and (6) potential lack of fuel due to damage to the fuel provider’s facilities. *Id.* at 23.

¹⁴ See PJM’s *Evolving Resource Mix and System Reliability* at 5 & n.15 (March 30, 2017) (“Evolving Resource Mix and Reliability Report”), which can be found at the following URL: <http://www.pjm.com/~media/library/reports-notices/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx>

“Resilience” (or lack thereof) within the resource context, as distinguishable from reliability, was not adequately defined in the DOE NOPR, but PJM understands it generally as a risk metric that potentially could be addressed through resource portfolio diversification. Therefore, in a theoretical sense, some improved measure of resource or fuel diversity or flexibility could potentially improve resilience because of a more diversified portfolio of resilience-related attributes, however identified or defined. For example, on-site liquid fuel for dual-fuel combustion turbines, as acknowledged under PJM’s Capacity Performance construct, narrowly could be viewed as a resilience-related attribute under some reliability scenarios associated with the natural gas pipeline infrastructure and gas-electric coordination. However, resilience, as distinct from reliability, typically is not viewed only within a narrow resource context. Instead, resilience typically is viewed within the context of the entire bulk electric system, and relates to preparing for, operating through, and recovering from a high-impact, low frequency event.¹⁵ Resilience involves protecting the bulk electric system as a whole and must take into consideration myriad aspects of the system such as transmission and distribution infrastructure, fuel security such as through gas/electric coordination, markets, physical and cyber security, and advanced system restoration. Therefore, the DOE NOPR’s emphasis on resilience as a resource issue is mostly misplaced.

Question 5

Is fuel diversity within a region or market itself important for resilience? If so, has the changing resource mix had a measurable impact on fuel diversity, or on resilience and reliability?

PJM Response

Yes, fuel diversity within a region or market is important for resilience. The current resource mix in PJM is the most fuel diverse it has ever been, and recent changes in the resource mix have positively impacted fuel diversity by incorporating a larger percentage of natural gas and renewables. If we proceed from the theoretical proposition that portfolio diversity reduces risk, we can reasonably surmise that PJM’s increased fuel diversity, and the flexibility it provides, has *reduced* resilience and reliability risks. However, as indicated in the Evolving Resource Mix and Reliability Report, more focused research on the topic of resilience may be needed, including identifying and defining resilience attributes.¹⁶

Indeed, while PJM has taken steps such as its Capacity Performance reforms and winter preparedness in response to the extreme weather conditions during the 2014 Polar Vortex, PJM believes more work should be undertaken with respect to ensuring resource performance and fuel security. That is, even though PJM’s resource mix is diverse, PJM will continue efforts to review system resilience from a fuel security perspective and will continue to evaluate generation performance incentives.

¹⁵ See *Id.* at 5 and n.16.

¹⁶ *Id.* at 6-7.

II. Eligibility

A. General Eligibility Questions

Question 1

In determining eligibility for compensation under the proposed rule, should there be a demonstration of a specific need for particular services? What should be the appropriate triggering and termination provisions for compensation under the proposed rule?

PJM Response

Yes, there must be a demonstration of need to support compensating any resource on our system on an out-of-market basis for any wholesale service it provides. RMR agreements today need to be justified before the Commission and are limited both in scope and duration. PJM does not believe that a sweeping designation of all units, irrespective of their location, cost structure or performance record is an appropriate substitute for market-based solutions and the very limited and targeted out-of-market solutions as a backstop. For all the reasons presented in the body of PJM's comments¹⁷ PJM does not believe there has been a demonstration of need for the proposed cost-of-service compensation to, in effect, coal and nuclear resources.

Nevertheless, to the extent the Commission seeks to value the resilience attributes of a resource through a cost-of-service rate, an approach similar to a reliability must run¹⁸ concept, which is in place today, could, under certain limited circumstances under RTO-specific rules, could provide a far more appropriate model. First, there would need to be well-defined criteria for determining if the resource is, in fact, needed for resilience to ensure a resource is actually needed for such service. Second, just like PJM's reliability must run provisions which are time-limited to the time between when a resource would seek to retire, and the time it takes to mitigate the impact of such retirement, so too should any RMR-like cost recovery be limited to the time in which the resilience attributes defined by the criteria are replaced.

Question 2

As the proposed rule focuses on preventing premature retirements, should a final rule be limited to existing units or should new resources also be eligible for cost-recovery? Should it also include repowering of previously retired units? Alternatively, should there be a minimum number of MW or a maximum number of MW for resources receiving cost-of service payments

¹⁷ PJM Comments at section II.A., B., and C.

¹⁸ PJM's reliability must run rules are contained in the deactivation section of its Open Access Transmission Tariff ("Tariff"), Part V. These rules provide a mechanism for compensating a generation resource to remain on line despite a documented plan to retire, if loss of such unit presents a reliability issue. But, the compensation is provided only until such time any reliability mitigation measures, such as a new generation resource coming on line or a transmission solution is in service, are in place.

for resilience services? If so, how should RTOs/ISOs determine this MW amount? Should this also include locational and seasonal requirements for eligible resources?

PJM Response

PJM does not agree with the premise of the proposal.

Question 3

Are there other technical characteristics that should be required for an eligible unit besides on-site fuel capability? If so, what are those technical characteristics and what benefits do they provide? What types of resources can meet the proposed eligibility criteria of the proposed rule? What proportion of total current generating capacity does this represent?

PJM Response

See prior responses in this section.

Question 4

If technically capable of sustaining output for a sufficient duration (and meeting other relevant requirements), should resources such as hydroelectric, geothermal, dual-fuel with adequate on-site storage, generating units with firm natural gas contracts, or energy storage (each of which might have a demonstrable store of energy to draw upon to sustain an electrical output, if not necessarily fuel) also be eligible? Why or why not? If technical capability is the appropriate criterion for eligibility, what specific technical capability should be required to be eligible?

PJM Response

The Staff's noting of the attributes of these particular resources in this question points out the unworkability of the DOE's arbitrary designation of a more narrow set of resources when different types of units provide different but needed reliability attributes to differing degrees.

Question 5

The proposed rule would require that eligible resources be able to provide essential energy and ancillary reliability services and includes a non-exhaustive list of services. What specific services should a resource be required to provide in order to be eligible?

PJM Response

See response to prior questions in this section.

Question 6

The proposed rule would limit eligibility to resources that are not subject to cost of service rate regulation by any state of local regulatory authority. How should the Commission and/or RTOs/ISOs determine which resources satisfy this eligibility requirement?

PJM Response

The DOE NOPR requires an examination of the regulatory structure as well as revenue streams available to individual coal and nuclear units. This is not an easy task given that in a number of cases, states do not operate under pure cost of service ratemaking which ties specific dollars to specific plants. As a result of rate settlements and the bundled nature of ratemaking, returns are not established on a unit by unit basis in the state ratemaking process. For this reason, PJM is not clear how the DOE intends FERC to actually implement this identification. Nevertheless, this examination and categorizing of different regulatory regimes is not a matter that should be assigned to the RTOs as it is outside of their core mission or area of expertise.

B. 90-day Requirement

Question 1

The proposed rule defines eligible resources as having a 90-day fuel supply. How should the quantity of a given resource's 90 days of fuel be determined? For example, should each resource be required to have sufficient fuel for 24 hours/day and sustained output at its upper operating limit for the entire 90-day period? Would there be any need for regional differences in this requirement?

PJM Response

For the reasons stated in PJM's response to the question on the Need for Reform, as well as discussed in the body of PJM's comments PJM does not believe there is a basis for the DOE's proposal. That said, the 90-day requirement is arbitrary at best. For instance, recent studies, including the Black Sky/Black Start Protection Initiative, suggest that 30 days of fuel inventory would be required to adequately respond to Black Sky type events.¹⁹ And, even if a resource has 90 days of supply, it does not mean it will be able to operate during extreme weather events where a coal pile freezes or the threat of sustained high winds may cause a nuclear facility to shut down, as discussed above.

¹⁹ See Black Sky/Black Start Protection Initiative which can be found at the following URL:
http://eiscouncil.org/App_Data/Upload/BSPI.pdf

Question 2

Is there a direct correlation between the quantity of on-site fuel and a given level of resilience or reliability? Please provide any pertinent analyses or studies. If there is such a correlation, is 90 days of on-site fuel necessary and sufficient to address outages and adverse events? Or is some other duration more appropriate?

PJM Response

PJM is not aware of any such showing.

C. Fuel Supply Requirement

Question 1

The proposed rule requires that resources must be in compliance with all applicable environmental regulations. How should environmental regulations be considered when determining eligibility? For example, if a unit that was capable of keeping 90-days of fuel on-site was subject to emission limits that would prevent it from running at its upper operating limit for 90 days, should that unit be eligible under this proposed rule?

PJM Response

For the reasons stated in PJM's response to the question on the Need for Reform, as well as discussed in the body of PJM's comments PJM does not believe there is a basis for the DOE's proposal. Nevertheless, environmental restrictions should be taken into account when evaluating the eligibility of a resource to be compensated pursuant to a well-defined resilience reason (which resilience criteria is lacking in the DOE NOPR). Absent the ability for the generator to run for 90-days without being emissions restricted, it would not make sense to guarantee 100% compensation for a unit that is environmentally related.

Question 2

As the proposed rule references the need for resilience due to extreme weather events, including hurricanes, should there be any other eligibility criteria for the resource or fuel supply (e.g., storm hardening)? What considerations should be given to the vulnerability of 90-day fuel supplies to natural or man-made disasters such as extreme cold temperatures, icing, flooding conditions, etc. that may impact the on-site fuel supply?

PJM Response

It is unclear to PJM how the 90-day fuel supply requirement proposed by the DOE will improve resilience during extreme weather events. Recent examples of hurricanes Sandy and Maria have shown that the distribution system as well as the transmission system are limiting factors in maintaining electricity delivery to loads during extreme weather events. PJM believes that shifting the focus to hardening the distribution network and enhancing the planning requirements

of the transmission system to include such severe weather events would have a much more significant impact on the resilience of the power system.

Question 3

Does the vulnerability or non-availability of on-site fuel supplies vary depending upon fuel type, location, region, or other factors?

PJM Response

Fuel type is just one component of a unit's availability in a given situation. One cannot generalize to 'select' one set of fuels over another. Rather, PJM urges consideration of analysis of reliability attributes consistent with PJM's recent analysis.²⁰ Ongoing review of fuel security and generation performance is also important to ensure a resilient system. That analysis was cited approvingly in the DOE August study but seems to have been disregarded for purposes of the DOE proposed NOPR.

III. Implementation

Question 1

How would eligible resources receiving cost of service compensation under the proposed rule be committed and dispatched in the energy market?

PJM Response

Such resources should be required to offer into the energy market at no less than their actual cost. Because such resources would be receiving cost of service compensation, they may have an incentive to offer into the energy market at below their actual cost. Doing so, however, would inappropriately suppress energy market prices, thereby distorting the price signals provided by the market for efficient resource entry and exit.

The DOE NOPR overlooks the fact that even with full cost of service recovery for the existing nuclear and coal fleet, PJM will still need to call on merchant generation in order to meet load in many hours. Yet the DOE subsidy of these units does serious violence to the market signal which the market is intended to send as to the value of all resources. Moreover, it will be harder to attract capital for new merchant generation which still will be needed to meet load, given that investors will flock to the new 'guarantee' created by DOE.

Question 2

How would eligible resources receiving cost based compensation under the proposed rule be considered in the clearing and pricing of centralized capacity markets?

²⁰ Evolving Resource Mix and Reliability Report.

PJM Response

Such resources should be required to offer into centralized capacity markets at no less than their actual going forward costs. Alternatively, resources could offer into these markets at below their going forward costs, if the market operator has adopted a mechanism by which the clearing price determined in those markets can be reconstituted to the competitive price for the purpose of compensating all unsubsidized resources in the market. Not adopting one of these two requirements would result in inappropriate price suppression in the capacity markets that would distort price signals and interfere with the markets' ability to drive efficient resource entry and exit.

However, even with these market safeguards, the distorting impact of the DOE subsidy will discourage investment in the kind of resources that do not meet the DOE-defined eligible class even though they will continue to be needed to meet load demands.

Question 3

What is the expected impact of this proposed rule on entry of new generation, reserve margins, retirement of existing resources, and on resource mix over time?

PJM Response

To the extent these resources are uneconomic and would otherwise retire and exit the market, even with the above protections the rule would have a negative impact on the markets' ability to drive efficient resource entry and exit. The continued operation of uneconomic resources in the market due to the presence of outside-the-market subsidies suppresses clearing prices, erodes investor confidence and stifles the innovation that has made the market successful and resulted in more reliable electric service at the lowest reasonable cost to consumers.

The impact on the reserve margin is dependent on the performance of the resources. To the extent the performance is, on average, worse than the average performance of the PJM fleet, then it will increase the Installed Reserve Margin.

Question 4

Should there be performance requirements for resources receiving compensation under the proposed rule? If so, what should the performance requirement be, and how should it be measured, or tested? What should be the consequence of not meeting the performance requirement?

PJM Response

Yes, the performance requirements on such resources should be identical to the performance requirements applied to all units in the market. Further, and critically, any penalties for non-performance, whether financial or physical, should not be recoverable through the cost-of-service rates envisioned in the rule. Allowing such recovery of performance penalties would

nullify the intended impact of the penalties to drive resource performance that supports system reliability.

Question 5

Should there be any restrictions on alternating between market-based and cost-based compensation?

PJM Response

This should be a one-time choice for any given unit. To allow switching between compensation methods would invite gaming by market participants based upon expectations as to where the greatest revenue could be earned at the expense of load.

IV. Rates

Question 1

The proposed rule lists compensable costs that should be included in the rate as operating and fuel expenses, costs of capital and debt, and a fair return on equity and investment. Are there other costs that would be appropriate to be included in the rate? Would any of the listed costs be inappropriate for inclusion?

PJM Response

PJM does not take a position on this question.

Question 2

Should wholesale market revenues offset any cost of service payments stemming from the proposed rule?

PJM Response

Although clearly wholesale revenues should be offset from cost of service recovery to avoid over-recovery, the distorting impact of this 'true up' for a select set of 'eligible' resources points out the discriminatory and unworkable nature of the DOE proposal.

Question 3

How should RTOs/ISOs allocate the cost of the proposed rule to market participants?

PJM Response

While PJM does not believe that the proposed rule meaningfully improves reliability or resilience, if it is accepted, it will be on the belief that it does. Therefore, if accepted, the costs should be allocated to the expected beneficiaries which would be real-time load and exports. Further, because the proposal is sweeping and requires compensation without regard to the locational value of any eligible resource, an allocation pro-rata across all load and exports would be consistent with the sweeping nature of the proposal itself given that it is difficult to identify specific loads as benefiting more than others from the DOE proposal and allocating costs along traditional "cost causation" grounds.

Question 4

How would the requirement that eligible resources receive full cost recovery be reconciled with the requirement, as stated in the regulatory text, that resources be dispatched during grid operations?

PJM Response

This question points out another inconsistency in the DOE proposal. Units are entitled to receive 'full cost recovery' including a return irrespective of whether they actually operate. The only way to reconcile this is to limit recovery to those hours when the units are determined to be needed to meet specific locational or system-wide reliability conditions during emergencies. Of course, this limitation appears inconsistent with the DOE's proposal making the two difficult to reconcile.

V. Other

Question 1

The proposed requirement for submitting a compliance filing is 15 days after the effective date of any Final Rule in this proceeding, with the tariff changes to take effect 15 days after the compliance filings are due. Please comment on the proposed timing, both to develop a mechanism for implementing the required changes and to implement those changes, including whether or not such changes could be developed and implemented within that timeframe.

PJM Response

PJM incorporates by reference the response of the ISO/RTO Council to this question.

Question 2

Please comment on the proposed rule's estimated burden of \$291,042 per respondent RTO/ISO, to develop and implement new market rules as proposed, including the potential software upgrades required to do so.

PJM Response

PJM incorporates by reference the response of the ISO/RTO Council to this question.

Question 3

Please describe any alternative approaches that could be taken to accomplish the stated goals of the proposed rule.

PJM Response

Please refer to the body of PJM's comments in section III concerning PJM's review of price formation reforms for the PJM Region.

Question 4

What impact would the proposed rule have on consumers?

PJM Response

Given the lack of details provided in the DOE NOPR, and the extremely short time frame in which to provide comments, PJM has not conducted analyses to provide a meaningful response to this question.

Question 5

The Commission may take notice of relevant public information, including information in other Commission proceedings. If a commenter views information in another Commission proceeding as relevant to the proposed rule, please identify that information and explain how it is relevant to the proposed rule. Such information may include a filing previously submitted by the commenter.

PJM Response

Below is a partial list of public information and Commission proceedings relevant to the proposed rule. Please also refer to the various proceedings and reports referenced throughout the body of PJM's comments.

(1) PJM's October 19, 2017 presentation to the Commission on winterization, which includes information on PJM's resilience-related activities and studies associated with gas-electric coordination, natural gas pipeline modeling and contingencies, cyber security, and potential storm surge impacts, <https://www.ferc.gov/industries/electric/indus-act/rto/10-19-17-A-4-PJM.pdf>. This information is relevant to the proposed rule because it demonstrates the scope and breadth of PJM's resilience-related activities, unrelated to an arbitrary on-site fuel requirement for favored resources.

(2) PJM's report on price formation issues submitted on February 17, 2016 in Docket No. AD14-14-000, *Price Formation in Energy and Ancillary Services Markets in Regional Transmission Organizations and Independent System Operators*, which summarize PJM's price formation issues and activities up to that time. The report is relevant to the proposed rule because it provides information on PJM's price formation efforts to promote resource flexibility and performance, as discussed in these comments.

(3) PJM's Report on Fuel Assurance Activities, submitted on February 18, 2015 in Docket No. AD14-8-000, *Winter 2013-2014 Operations and Market Performance in Regional Transmission Organizations and Independent System Operators*, in which PJM reported on the status of its efforts to address market and system performance issues associated with generator access to sufficient fuel supplies and the firmness of generator fuel arrangements. These fuel assurance activities are relevant to the proposed rule because they represent concrete actions that PJM already has taken to ensure fuel availability during extreme events, such as potential events similar to the Polar Vortex.

(4) The Commission proceedings in Docket Nos. ER15-623 and EL15-29 regarding PJM's Capacity Performance construct, which better ensures that committed capacity resources will perform when called upon to meet the reliability needs of the PJM region. The Capacity Performance construct is relevant to the proposed rule because it demonstrates concrete action that PJM already has taken to ensure resource availability and reliability during extreme events, such as potential events similar to the Polar Vortex.

(5) PJM's post-technical conference comments submitted on May 15, 2014 in Docket No. AD14-8-000, *Winter 2013-2014 Operations and Market Performance in Regional Transmission Organizations and Independent System Operators*, which reference the PJM report entitled *Analysis of Operational Events and Market Impacts during the January 2014 Cold Weather Events*, <http://www.pjm.com/~media/library/reports-notice/weather-related/20140509-analysis-of-operational-events-and-market-impacts-during-the-jan-2014-cold-weather-events.ashx> (May 8, 2014). The comments and report are relevant to the proposed rule because they describe actual extreme events, associated with the Polar Vortex, to which PJM already has responded with concrete action to ensure resource availability and reliability.

APPENDIX B
to
PJM COMMENTS IN RM18-1-000
OCTOBER 23, 2017



October 23, 2017

Mr. Stu Bresler
Senior Vice President Operations & Markets
PJM Interconnection
2750 Monroe Blvd
Audubon, PA 19403

SUBJECT: PJM Price Formation

Dear Mr. Bresler:

I participated with the PJM staff and Board members in the discussion of an important initiative in the evolution of the PJM energy market. PJM staff is proposing to reform the existing pricing model in order to ensure that the incremental cost of serving load is reflected in LMP to the fullest extent possible, uplift is reduced and incentives are maintained. This follows the principles of sound market design. Enhanced energy market price signals will strengthen performance incentives in PJM's markets and is complementary to other reforms being considered by PJM. Given my knowledge of the PJM resource profile, this reform would be an appropriate step forward in price formation for the PJM region.

The market design in PJM follows the basic principles of bid-based, security-constrained, economic dispatch with locational prices. This design is the only approach that is consistent with an efficient energy market under the principles of open-access and non-discrimination. A crucial element of this model is that the prices and related payments support the efficient dispatch. In particular, it serves to achieve the goal that market participants who take prices as given would have no incentive to deviate from the dispatch, and would help make bids and offers consistent with their underlying costs.

The foremost element of this market design is the use of locational marginal prices. Under certain simplifying assumptions, these locational marginal prices provide all that would be needed to support the efficient dispatch. Relying on the locational marginal prices has served the PJM markets well for many years, even though in some circumstances additional payments have been required.

Mr. Stu Bresler
October 23, 2017
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I have discussed with PJM staff the circumstances that deviate from the simplifying assumptions required for locational marginal prices alone to provide full support for efficient operations. Most prominent are conditions where the problem expands to include commitment decisions with start-up costs and associated constraints such as minimum output levels and minimum run-times. Under these conditions, locational marginal prices alone cannot always be guaranteed to support the efficient outcome and additional associated payments are made that must be recovered as part of an “uplift” charge. The additional payments in aggregate equal the foregone profits from following the dispatch. PJM has explained that within the PJM region, its resource profile, flattening price curves and reduced infra-marginal rents have brought the limitations of the locational marginal prices to the forefront and that the PJM market as a whole would benefit from the proposed enhancements for price formation.

The use of locational prices is still indicated, but the choice of these prices has effects on the amount of the uplift. There is an argument for choosing the locational prices, that cover the bulk of the energy revenues, to come as close as possible to minimizing the need for the additional uplift payments. As I have discussed with PJM staff, this ideal case both supports the dispatch and minimizes the uplift.¹ However, this approach presents computational requirements that would be challenging under the best of circumstances, and even more difficult to apply in the short intervals required for the real-time spot market.

A natural approximation to the minimum-uplift model is available in the “integer relaxation,” as PJM intends to propose. This approach employs a pricing model that relaxes the complicating commitment constraints and restores the simplifying assumptions to ensure that the marginal price of the system will not decrease when demand increases. The locational marginal prices from this relaxed model would be easy to obtain. Under certain conditions, the prices from the integer relaxation would be the associated minimum-uplift prices. In general, the integer-relaxation prices should be close to providing the minimum uplift results.

Importantly, the enhanced price formation PJM intends to propose would be compatible with other reforms that are part of the larger discussion in PJM. For example, the enhanced pricing would be extended in practice to deal with multi-period problems where ramp rates and other flexibilities are important. Furthermore, the enhanced pricing model could accommodate improved scarcity pricing which should play a prominent role in adapting to changing market conditions with increasing supplies of intermittent or distributed resources.

I support the energy pricing method PJM intends to propose. But I do not expect it likely to produce a dramatic change or have as significant an impact as improved scarcity pricing. Currently PJM’s rules for shortage pricing do not accurately value energy and reserves during

¹ This is known as the “minimum uplift” or “convex hull” approach. See (Gribik, Hogan, & Pope, 2007).

Mr. Stu Bresler
October 23, 2017
Page 3

reserve shortages. Based on the current penalty factors, the value of energy and reserves do not approach the estimated value of lost load (VOLL). Additionally, PJM's demand curves do not articulate the reliability value of reserves to the system. To fully address price formation, reforms are required to PJM's shortage pricing approach as well. Nonetheless, PJM's proposal to implement integer relaxation is a beneficial and essential first step toward solving the bigger issue of a more comprehensive enhancement of energy and reserve price formation. And given the circumstances faced by PJM as described above, I am supportive of this approach as a reasonable and appropriate step to be proposed by PJM as a means to address needed price formation reforms in the PJM market.

Very truly yours,



William W. Hogan²
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Reference

Gribik, P. R., Hogan, W. W., & Pope, S. L. (2007). Market-Clearing Electricity Prices and Energy Uplift. Retrieved from http://www.hks.harvard.edu/fs/whogan/Gribik_Hogan_Pope_Price_Uplift_123107.pdf

² Note: These comments are those of William Hogan, and do not necessarily represent the views of anyone else. The work has been supported by PJM and FTI Consulting.

Document Content(s)

PJM DOE NOPR Comments.PDF.....1-76

162 FERC ¶ 61,012
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Kevin J. McIntyre, Chairman;
Cheryl A. LaFleur, Neil Chatterjee,
Robert F. Powelson, and Richard Glick.

Grid Reliability and Resilience Pricing

Docket Nos. RM18-1-000

Grid Resilience in Regional Transmission Organizations
and Independent System Operators

AD18-7-000

ORDER TERMINATING RULEMAKING PROCEEDING,
INITIATING NEW PROCEEDING,
AND ESTABLISHING ADDITIONAL PROCEDURES

(Issued January 8, 2018)

1. The Commission previously has taken steps with regard to reliability and other matters that have helped to address the resilience of the bulk power system. The Commission recognizes that we must remain vigilant with respect to resilience challenges, because affordable and reliable electricity is vital to the country's economic and national security. As explained below, we are terminating the proceeding we initiated in Docket No. RM18-1-000 to address the Proposed Rule on Grid Reliability and Resilience Pricing (Proposed Rule) submitted to the Commission by the Secretary of Energy.¹ Nonetheless, we appreciate the Secretary reinforcing the resilience of the bulk power system as an important issue that warrants further attention. To that end, we are initiating a new proceeding in Docket No. AD18-7-000 to specifically evaluate the resilience of the bulk power system in the regions operated by regional transmission organizations (RTO) and independent system operators (ISO). In this order, we direct each RTO and ISO to submit information to the Commission on certain resilience issues and concerns identified herein to enable us to examine holistically the resilience of the bulk power system. The resilience of the bulk power system will remain a priority of this Commission. We expect to review the additional material and promptly decide whether additional Commission action is warranted to address grid resilience.

¹ *Grid Resiliency Pricing Rule*, 82 Fed. Reg. 46,940 (Oct. 10, 2017).

I. Proposed Rule

2. On September 29, 2017, the Secretary submitted the Proposed Rule pursuant to section 403 of the Department of Energy (DOE) Organization Act. The Proposed Rule directed the Commission to consider requiring certain RTOs and ISOs to establish a tariff mechanism providing for: (1) the purchase of energy from an eligible “reliability and resilience resource;” and (2) the recovery of costs and a return on equity for such resources (i.e., a “resilience rate”). The Proposed Rule stated that eligible reliability and resilience resources must be: (1) located in an RTO/ISO with an energy and capacity market; (2) be able to provide essential reliability services;² and (3) have a 90-day fuel supply on-site.

3. As the basis for these requirements, the Proposed Rule cited: (1) significant retirements of baseload generation, particularly coal and nuclear resources; (2) the 2014 Polar Vortex, which the Proposed Rule states exposed problems with the resilience of the grid; and (3) a growing recognition that organized markets do not compensate resources for all of the attributes they contribute to the grid, including resilience.

4. The Secretary directed the Commission to consider and take final action on the Proposed Rule within 60 days of the date of publication in the Federal Register, or, alternatively, to issue the DOE’s proposed rule as an interim final rule immediately, with provision for later modification after consideration of public comments.

5. The Commission initiated Docket No. RM18-1-000 to consider the Proposed Rule. The Commission issued a Notice Inviting Comments on the Proposed Rule on October 2, 2017, with initial comments due on October 23, 2017, and reply comments due on November 7, 2017.³ In addition, on October 4, 2017, the Director of the Commission’s Office of Energy Policy and Innovation issued a request for information seeking responses and comment on a number of specific questions raised by the Proposed Rule.⁴ The Commission received extensive comments and reply comments in response to the Proposed Rule and the Staff Request for Information from a wide variety of interested stakeholders, including utilities, generators, federal and state legislators, state regulatory

² The essential reliability services were to include, but not be limited to: voltage support, frequency services, operating reserves, and reactive power. Proposed Rule at 18.

³ *Grid Reliability and Resilience Pricing*, Notice Inviting Comments (Oct. 2, 2017).

⁴ *Grid Reliability and Resilience Pricing*, Staff Request for Information (Oct. 4, 2017).

agencies and state attorneys general, industrial customers, environmental organizations, mining companies, other industries, and individuals.

6. On December 7, 2017, the Chairman of the Commission proposed to the Secretary of Energy that a 30-day extension be granted to address the Proposed Rule. On December 8, 2017, the Secretary of Energy responded, granting the extension and thereby giving the Commission until January 10, 2018, to address the Proposed Rule.

II. Discussion

A. Background

1. Evolution of the Electric Power Industry

7. To more fully understand the context in which the Proposed Rule was issued and the actions we are taking here, it is important to recount briefly the structural and operational origins and evolution of the electric power industry. Historically, vertically integrated utilities generally built and owned the generation, transmission, and distribution facilities needed to serve load within their respective defined service territories. Utilities constructed generation facilities that they determined were best suited to meet that load. Utility rates were historically regulated by federal and state regulators on a cost-of-service basis; the utilities charged for electric generation at rates calculated to compensate them for their actual costs plus a fair rate of return. In other words, during this early period, there was no market structure as we understand it in today's electric power industry.⁵

8. Beginning in the 1970s, statutory and regulatory developments at the federal and state level encouraged the development of competitive electricity markets, including encouraging the growth of non-utility generators.⁶ In 1996, this Commission issued its

⁵ The Commission's Order No. 888, discussed below, recounts the historical landscape following enactment of the Federal Power Act (FPA) in 1935. *See Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at 31,639-31,645 (1996).

⁶ For instance, the Public Utility Regulatory Policies Act of 1978 and the Energy Policy Act of 1992 helped spur competition in the electric power industry. Additionally, the Commission began authorizing entities to make electric power sales at market-based rates starting in the late 1980s. The market-based rate program continues to be a critical part of the Commission's electric regulatory responsibilities.

landmark Order No. 888,⁷ which required public utility transmission providers to provide open access transmission service and developed principles for the concept of ISOs and RTOs, and in 1999 the Commission issued Order No. 2000,⁸ which expressly encouraged the development of such regional entities with the intent of using such entities to foster competitive power markets. Meanwhile, starting in the 1990s, a number of states restructured their retail electricity markets to allow for more competition in the generation sector, which further contributed to development of bulk power markets and increased reliance on independent regional bodies for operation of the grid.

9. The traditional vertically integrated model was significantly affected by these developments, particularly in regions of the country where RTOs and ISOs manage the transmission grid. Notably, subject to Commission approval, RTOs/ISOs have developed organized markets for electric energy and ancillary services, and a number of them have also established centralized capacity markets. Thus, for more than two decades now, support for markets and market-based solutions has been a core tenet of Commission policy. A result of this approach has been that in regions with organized markets, the Commission has largely adopted a pro-market regulatory model, wherein the Commission relies on competition in approving market rules and procedures that, in turn, determine the prices for the energy, ancillary services, and capacity products (where applicable). Under this pro-competition, market-driven system, owners of generating facilities that are unable to remain economic in the market may take steps to retire or mothball their facilities.

10. A continually evolving phenomenon that has affected the development and evolution of electric markets is innovation in the energy sector and the change in the energy resource mix. As part of its ongoing oversight of wholesale electric markets, the Commission continues to evaluate its current rules and has issued several orders to ensure that our rates in our markets remain just and reasonable and not unduly discriminatory or

⁷ *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

⁸ *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), *aff'd sub nom. Pub. Util. Dist. No. 1 v. FERC*, 272 F.3d 607 (D.C. Cir. 2001).

preferential. For example, the Commission has acted to remove barriers to the integration and participation of variable energy⁹ and demand response resources,¹⁰ as well as revising or expanding compensation opportunities for various grid services, such as frequency regulation.¹¹

11. The Commission's support of competitive wholesale electricity markets has been grounded in the substantial and well-documented economic benefits that these markets provide to consumers. In Order No. 890, for example, the Commission cited a DOE study that found that competition had reduced consumers' bills by billions of dollars a year, even as it found that additional savings could be achieved by removing congestion bottlenecks.¹² In Order No. 719, the Commission explained that effective wholesale competition protects consumers by "providing more supply options, encouraging new entry and innovation, spurring deployment of new technologies, promoting demand response and energy efficiency, improving operating performance, exerting downward pressure on costs, and shifting risk away from consumers."¹³ At the same time, however, the Commission has continued to ensure that reliability is at the forefront of its responsibilities. The Commission's endorsement of markets does not conflict with its oversight of reliability, and the Commission has been able to focus on both without compromising its commitment to either.¹⁴

⁹ *Integration of Variable Energy Resources*, Order No. 764, FERC Stats. & Regs. ¶ 31,331 (cross-referenced at 139 FERC ¶ 61,246) (2012).

¹⁰ *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, FERC Stats. & Regs. 31,322 (cross-referenced at 134 FERC ¶ 61,187) (2011).

¹¹ *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, Order No. 755, FERC Stats. & Regs. 31,324 (cross-referenced at 137 FERC ¶ 61,064) (2011).

¹² *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, at P 60 (2007) (citing DOE, National Transmission Grid Study (May 2002)).

¹³ *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281, at P 1 (2008).

¹⁴ For example, the Commission has held that out-of-market actions may be warranted in certain instances to address demonstrated reliability concerns. The Commission has approved these actions, however, on a limited basis, only as a last resort, and only after there has been a specific showing of an immediate reliability need. *See*,

2. The Commission's Efforts to Help Ensure Bulk Power System Resilience

12. The Commission has taken action to address reliability and other issues with regard to the bulk power system that have helped with the bulk power system's resilience, even though we may not have used that particular term. For example, in response to the increasing use of natural gas for electric generation, the Commission conducted a multi-year effort to evaluate the coordination of wholesale natural gas and electricity market scheduling, resulting in significant improvements to those scheduling and coordination processes.¹⁵ The Commission has also specifically examined the grid's response to the events of the 2014 Polar Vortex,¹⁶ and how each RTO/ISO addresses fuel assurance.¹⁷ Critically, the Commission has also approved significant capacity market reforms in ISO New England, Inc. (ISO-NE) and PJM Interconnection, L.L.C. (PJM) that are designed to bolster performance from capacity resources and to help address fuel supply issues during periods of system stress.¹⁸ Those market reforms created financial

e.g., New York Independent System Operator, Inc., 150 FERC ¶ 61,116, at P 11 (2015) ("This last requirement reflects our belief that RMR filings should be made only to temporarily address the need to retain certain generation until more permanent solutions are in place and that all alternatives should be considered to ensure that designating a generator for RMR service is a last resort option for meeting immediate reliability needs"). *See also Cal Indep. Sys. Operator Corp.*, 87 FERC ¶ 61,250, at 61,968 (1999) (approving partial settlement concerning RMR agreements and stating that the Commission "in its promotion of efficient competitive markets, wishes to ensure that RMR operations under the settlement do not result in any unforeseen market distortions.").

¹⁵ *See Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*, Order No. 809, FERC Stats. & Regs. ¶31,368 (cross-referenced at 151 FERC ¶ 61,049) (2015).

¹⁶ *Centralized Capacity Markets in Regional Transmission Organizations and Independent System Operators*, 149 FERC ¶ 61,145 (2014) (order addressing technical conferences on, among other things, the 2014 Polar Vortex).

¹⁷ *Id.*

¹⁸ *See ISO New England Inc. and New England Power Pool*, 147 FERC ¶ 61,172 (2014), *reh'g denied*, 153 FERC ¶ 61,223 (2015), *appeal pending sub nom. New England Power Generators Ass'n v. FERC*, No. 16-1023 (D.C. Cir. filed Jan. 19, 2016). *See also*

incentives to enhance reliability during extreme operating conditions. While none of the Commission's efforts described above were specifically targeted at "resilience" by name, they were directed at elements of resilience, in that they sought to ensure the uninterrupted supply of electricity in the face of fuel disruptions or extreme weather threats. Further, the Commission has conducted significant work to address bulk power system reliability through the North American Electric Reliability Corporation (NERC) reliability standards, including its continued work on Critical Infrastructure Protection standards to protect the system against cybersecurity and physical security threats,¹⁹ as well as geomagnetic disturbances.²⁰

13. Notwithstanding these and other Commission efforts to address the resilience of the bulk power system, we conclude that resilience remains an important issue that warrants the Commission's continued attention, including through the development of a clear understanding of what each RTO/ISO currently does with respect to the assurance or strengthening of resilience and what more the RTOs/ISOs and the Commission could be doing on this issue. Accordingly, although we terminate the Proposed Rule proceeding as discussed below, we are not ending our work on the issue of resilience. To the contrary, we are initiating a new proceeding to address resilience in a broader context and are directing the RTOs/ISOs to provide information – followed by an opportunity for comment by any other interested entity – that will inform us as to whether additional actions by the Commission and the ISOs/RTOs are warranted with regard to resilience issues.

PJM Interconnection, L.L.C., 151 FERC ¶ 61,208 (2015), *reh'g denied*, 155 FERC ¶ 61,157 (2016), *aff'd sub nom. Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656 (D.C. Cir. 2017).

¹⁹ See *Physical Security Reliability Standard*, Order No. 802, 149 FERC ¶ 61,140 (2014); *Revised Critical Infrastructure Protection Reliability Standards*, Order No. 822, 154 FERC ¶ 61,037 (2016), *reh'g denied*, Order No. 822-A, 156 FERC ¶ 61,052 (2016); *Revised Critical Infrastructure Protection Reliability Standards*, Order No. 829, 156 FERC ¶ 61,050 (2016); *Cyber Systems in Control Centers*, Notice of Inquiry, FERC Stats. & Regs. ¶ 35,557 (2016); *Revised Critical Infrastructure Protection Reliability Standards CIP-003-7 – Cyber Security – Security Management Controls*, Notice of Proposed Rulemaking, 161 FERC ¶ 61,047 (2017).

²⁰ See *Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events*, Order No. 830, 156 FERC ¶ 61,215 (2016).

B. Termination of Docket No. RM18-1-000

14. Having considered the Proposed Rule and the comments received in Docket No. RM18-1-000, we terminate the proceeding in Docket No. RM18-1-000. The FPA is clear: in order to require RTOs/ISOs to implement tariff changes as contemplated by the Proposed Rule, there must be a demonstration that the specific statutory standards of section 206 of the FPA are satisfied. Thus, there must first be a showing that the existing RTO/ISO tariffs are unjust, unreasonable, unduly discriminatory or preferential.²¹ Then, any remedy proposed under FPA section 206 must be shown to be just, reasonable, and not unduly discriminatory or preferential.²² For the reasons discussed below, the Proposed Rule did not satisfy those clear and fundamental legal requirements under section 206 of the FPA. Given those legal requirements, we have no choice but to terminate Docket No. RM18-1-000.

15. Neither the Proposed Rule nor the record in this proceeding has satisfied the threshold statutory requirement of demonstrating that the RTO/ISO tariffs are unjust and unreasonable. While some commenters allege grid resilience or reliability issues due to potential retirements of particular resources,²³ we find that these assertions do not demonstrate the unjustness or unreasonableness of the existing RTO/ISO tariffs. In addition, the extensive comments submitted by the RTOs/ISOs do not point to any past or planned generator retirements that may be a threat to grid resilience.²⁴ We also disagree

²¹ 16 U.S.C. § 824e(a) (2012). *See also, e.g., Emera Maine v. FERC*, 854 F.3d 9, 25 (D.C. Cir. 2017) (“Without a showing that the existing rate is unlawful, FERC has no authority to impose a new rate.”); *FirstEnergy Serv. Co. v. FERC*, 758 F.3d 346, 353 (D.C. Cir. 2014) (“Regardless of whether it is charged with completing step two, proposing new just and reasonable rates, [petitioner] still must complete step one, demonstrating that PJM’s existing rates are unjust and unreasonable.”).

²² 16 U.S.C. § 824e(a) (2012).

²³ *See, e.g.,* PSEG Companies Initial Comments at 5-6; Exelon Corporation Initial Comments at 1, 25-26; FirstEnergy Service Company and its named affiliates (FirstEnergy) Initial Comments at 32-34.

²⁴ *See* New York Independent System Operator, Inc. Initial Comments at 4-5; PJM Initial Comments at 15; ISO-NE Initial Comments at 1-3; Midcontinent Independent System Operator, Inc. (MISO) Initial Comments at 5-11.

Docket Nos. RM18-1-000 and AD18-7-000

with assertions that an adequate record exists through the Commission's price formation efforts to support the Proposed Rule's action regarding bulk power system resilience.²⁵

16. Turning to the second prong of the section 206 analysis, we note that the Proposed Rule would allow all eligible resources to receive a cost-of-service rate regardless of need or cost to the system.²⁶ The record, however, does not demonstrate that such an outcome would be just and reasonable.²⁷ It also has not been shown that the remedy in the Proposed Rule would not be unduly discriminatory or preferential.²⁸ For example, the Proposed Rule's on-site 90-day fuel supply requirement would appear to permit only

²⁵ The goals of the price formation proceeding center largely on facilitating competition and ensuring that market prices reflect the marginal cost of production so that prices accurately reflect system conditions and operational constraints. *See Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice Inviting Post-Technical Workshop Comments, Docket No. AD14-14-000, at 1 (Jan. 16, 2015) (Notice Inviting Comments); *Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice, Docket No. AD14-14-000 (June 19, 2014) (Price Formation Notice). Thus, that proceeding does not include even an attempted nexus to bulk power system resilience, whereas in the Proposed Rule and in the proceeding we are newly establishing here, the resilience of the bulk power system is the principal focus. In addition, there is no evidence in other Commission proceedings indicating that any RTO/ISO tariffs are unjust and unreasonable because they do not adequately account for resilience.

²⁶ As noted above, the Commission typically has approved as just and reasonable cost-of-service rates through out-of-market arrangements in very limited circumstances and when there is a demonstrated reliability need. *See* note 14, *supra*.

²⁷ For example, the Proposed Rule proposes that RTOs/ISOs pay a cost-of-service rate to a resource that has a 90-day fuel supply on site to enable it to operate during an emergency, extreme weather conditions, or a natural or man-made disaster. However, neither the Proposed Rule nor the record demonstrate why the existence of an on-site 90-day fuel supply is a reasonable basis to find that rate to be just and reasonable and not unduly discriminatory or preferential. In addition, the Proposed Rule does not address the concern that an eligible resource located in a constrained area may not assist with the resilience of the bulk power system to warrant that rate.

²⁸ To be clear, notwithstanding our ruling under section 206 with regard to the Proposed Rule, if an RTO/ISO were to identify a specific threat to the resilience of its system, we would promptly consider an appropriate proposal from the RTO/ISO to address the issue.

certain resources to be eligible for the rate, thereby excluding other resources that may have resilience attributes.

C. Initiating a New Proceeding and Establishing Additional Procedures on Resilience

17. Even though we are terminating Docket No. RM18-1-000, the Commission concluded that it must remain vigilant with respect to resilience challenges. Although the Proposed Rule failed to satisfy the fundamental legal requirements of section 206 of the FPA, the Proposed Rule and the record developed to date have shed additional light on resilience more generally and on the need for further examination by the Commission and market participants of the risks that the bulk power system faces and possible ways to address those risks in the changing electric markets. As the DOE Grid Study documented, we have seen a variety of economic, environmental, and policy drivers that are changing the way electricity is procured and used.²⁹ These changes present new opportunities and challenges regarding the reliability, affordability, and environmental profile of each region's electric system. These changes may impact the resilience of the bulk power system. As we navigate these changes, the Commission's markets, transmission planning rules, and reliability standards should evolve as needed to address the bulk power system's continued reliability and resilience.³⁰

18. Therefore, we are initiating a new proceeding, Docket No. AD18-7-000, to take additional steps to explore resilience issues in the RTOs/ISOs. The goal of this proceeding is: (1) to develop a common understanding among the Commission, industry, and others of what resilience of the bulk power system means and requires; (2) to understand how each RTO and ISO assesses resilience in its geographic footprint; and (3) to use this information to evaluate whether additional Commission action regarding resilience is appropriate at this time. This examination of the resilience of the bulk power system will be a priority of the Commission. Therefore, as described below, we direct each RTO and ISO to submit specific information regarding the resilience of its respective region within 60 days.

²⁹ *Staff Report to the Secretary on Electricity Markets and Reliability*, United States Department of Energy (Aug. 2017), available at https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf.

³⁰ On December 14, 2017, NERC issued its 2017 Long-term Reliability Assessment. That assessment reinforces the continuing need for the Commission to be vigilant and to make the resilience of the bulk power system a priority of the Commission.

19. We recognize that the RTOs/ISOs are well-suited to understand the needs of their respective regions and initially assess how to address resilience given their individual geographic needs. Although the Proposed Rule focuses on one possible aspect of grid resilience – secure onsite fuel – we conclude that a proper evaluation of grid resilience should not be limited to that single issue, and should instead encompass a broader consideration of resilience issues, including wholesale electric market rules, planning and coordination, and NERC standards. Indeed, the efforts of RTOs and ISOs on grid resilience encompass a range of activities, including wholesale electric market design, transmission planning, mandatory reliability standards, emergency action plan development, inventory management, and routine system maintenance. However, many of these activities are not unique to RTOs/ISOs and are performed by transmission providers in areas that do not have centralized wholesale electricity markets. Similarly, NERC and the regional entities tasked with implementation of mandatory reliability standards have a critical role to play in this area. Although hearing from the RTOs/ISOs on this topic is an appropriate place to begin, we will provide interested entities an opportunity to submit reply comments on the RTO/ISO submissions within 30 days of the due date of those submissions.³¹

20. We anticipate that the RTO/ISO submissions will explain how they currently address resilience of the bulk power system within their footprints, and will highlight any specific or unique resilience challenges faced by the regions. The submissions also will give the RTOs/ISOs the opportunity to discuss potential paths forward for addressing any identified gaps or exposure on the resilience of the bulk power system.

1. A Common Understanding of Resilience

21. In order to appropriately study the resilience of the bulk power system in the RTO/ISO regions, we think it is appropriate to first achieve a common understanding of what resilience is in the context of the bulk power system.

³¹ Our focus on the RTOs/ISOs should not be understood to mean that we believe that those systems are less resilient than non-RTO/ISO regions. Rather, we conclude that a targeted proceeding focused on those regions is a prudent next step in our consideration of resilience of the bulk power system. We also note that the concept of resilience necessarily involves issues, topics, and questions that extend beyond the Commission's jurisdiction, such as distribution system reliability and modernization. The Commission encourages RTOs/ISOs and other interested entities to engage with state regulators and other stakeholders through Regional State Committees or other venues to address resilience at the distribution level.

22. According to comments on the Proposed Rule, there seems to be a general consensus that grid reliability and grid resilience are related but separate concepts, with the elements of grid reliability being better understood and defined. It also is evident that there is currently no uniform definition of resilience used across the electric industry. For example, the Proposed Rule states that certain natural and man-made disasters threaten the resilience of the grid, but does not set forth a clear definition for resilience. Commenters have cited various definitions of resilience, including from the National Infrastructure Advisory Council,³² the National Academy of Sciences,³³ Argonne National Laboratory,³⁴ PJM,³⁵ and Presidential Policy Directive 21.³⁶ The Commission notes that commenters generally defined resilience similarly (i.e., as the ability of the bulk power system to withstand or recover from disruptive events).³⁷

23. To help guide consideration of issues related to resilience of the bulk power system, the Commission understands resilience to mean:

³² National Infrastructure Advisory Council, *A Framework for Establishing Critical Infrastructure Resilience Goals: Final Report and Recommendations by the Council* at 15 (Oct. 2010).

³³ National Academy of Sciences, *Enhancing the Resilience of the Nation's Electricity System*, Washington, DC: National Academies Press (Sept. 2017), available at <https://www.nap.edu/catalog/24836/enhancing-the-resilience-of-the-nations-electricity-system>.

³⁴ Department of Energy, Argonne National Laboratory, *Front-Line Resilience Perspectives: The Electric Grid*, Executive Summary at xiii (Nov. 2016), available at <https://energy.gov/sites/prod/files/2017/01/f34/Front-Line%20Resilience%20Perspectives%20The%20Electric%20Grid.pdf>.

³⁵ PJM Interconnection, L.L.C., *PJM's Evolving Resource Mix and System Reliability* n.16 (March 30, 2017), available at <http://www.pjm.com/~media/library/reports-notice/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx>.

³⁶ Michael Moore, Independent Consultant, Comments at 2; Nuclear Energy Institute Comments at 19 (citing Nat'l Archives, Archived Obama White House Website, Presidential Policy Directive 21: Critical Infrastructure Security and Resilience (PPD-21) (Feb. 12, 2013)).

³⁷ See, e.g., Comments of Utility Workers Union of America, AFL-CIO (UWUA) at 5-6 (citing *PJM's Evolving Resource Mix and System Reliability*); FirstEnergy Initial Comments at 17.

The ability to withstand and reduce the magnitude and/or duration of disruptive events, which includes the capability to anticipate, absorb, adapt to, and/or rapidly recover from such an event.³⁸

We seek comment from the RTOs and ISOs on our understanding of resilience as described above. We also ask for comments on whether any of the terms used above require further elaboration to ensure a common understanding (e.g., identification of the particular types of disruptive events).

24. Resilience could encompass a range of attributes, characteristics, and services that allow the grid to withstand, adapt to, and recover from both naturally occurring and man-made disruptive events. At the most basic level, ensuring resilience requires that we both (1) determine which risks to the grid we are going to protect against, and (2) identify the steps, if any, needed to ensure those risks are addressed.

2. How RTOs/ISOs Assess Threats to Resilience

25. Next, the Commission seeks comment on how each RTO/ISO currently evaluates the resilience of its system. The Commission recognizes regional differences among the RTOs/ISOs, and appreciates that those differences likely impact how each RTO/ISO approaches resilience in its region. The Commission directs the RTOs/ISOs to address the following questions on this issue and, as needed, to highlight any unique resilience challenges that exist in their respective regions.³⁹

(a) What are the primary risks to resilience in your region from both naturally occurring and man-made threats? How do you identify them? Are they short-, mid-, or long-term challenges?

(b) How do you assess the impact and likelihood of resilience risks?

(c) Please explain how you identify and plan for risks associated with high-impact, low-frequency events (e.g., physical and cyber attacks, accidents, extended fuel supply disruptions, or extreme weather events). Please discuss the challenges you face in trying to assess the impact and likelihood of high-impact, low-frequency risks. In addition, please describe what additional information, if any, would be helpful in assessing the impact and likelihood of such risks.

³⁸ Generally based on the National Infrastructure Advisory Council's *Critical Infrastructure Resilience Final Report and Recommendations* at 8 (Sept. 8, 2009).

³⁹ The RTOs/ISOs should not include Critical Energy/Electric Infrastructure Information (CEII) in their submissions.

(d) Should each RTO/ISO be required to identify resilience needs by assessing its portfolio of resources against contingencies that could result in the loss or unavailability of key infrastructure and systems? For example, should RTOs/ISOs identify as a resilience threat the potential for multiple outages that are correlated with each other, such as if a group of generators share a common mode of failure (e.g., a correlated generator outage event, such as a wide-scale disruption to fuel supply that could result in outages of a greater number of generating facilities)? The RTOs/ISOs should also discuss resilience threats other than through a correlated outage approach. Do RTOs/ISOs currently consider these types of possibilities, and if so, how is this information used?

(e) Identify any studies that have been conducted, are currently in progress, or are planned to be performed in the future to identify the ability of the bulk power system to withstand a high-impact, low-frequency event (e.g., physical and cyber-attacks, accidents, extended fuel supply disruptions, or extreme weather events). Please describe whether any such studies are conducted as part of a periodic review process or conducted on an as-needed basis.⁴⁰

(f) In these studies, what specific events and contingencies are selected, modeled, and assessed? How are these events and contingencies selected?

(g) What criteria (e.g., load loss (MW)), duration of load loss, vulnerability of generator outages, duration of generator outages, etc.) are used in these studies to determine if the bulk power system will reasonably be able to withstand a high-impact, low-frequency event? Are the studies based on probabilistic analyses or deterministic analyses?

(h) Do any studies that you have conducted indicate whether the bulk power system is able to reasonably withstand a high-impact, low frequency event? If so, please describe any actions you have taken or are planning as mitigation, and whether additional actions are needed.

(i) How do you determine whether the threats from severe disturbances, such as those from low probability, high impact events require mitigation? Please describe any approaches or criteria you currently use or otherwise believe are useful in determining whether certain threats require mitigation.

⁴⁰ The Commission is not directing that these studies be included in the RTO/ISO submissions filed in response to this order. Instead, the RTOs/ISOs are required to identify and describe such studies in their submissions.

- (j) How do you evaluate whether further steps are needed to ensure that the system is capable of withstanding or reducing the magnitude of these high-impact, low frequency events?
- (k) What attributes of the bulk power system contribute to resilience? How do you evaluate whether specific components of the bulk power system contribute to system resilience? What component-level characteristic, such as useful life or emergency ratings, support resilience at the system level?
- (l) If applicable, how do you determine the quantity and type of bulk power system physical asset attributes needed to support resilience? Please include, if applicable, what engineering and design requirements, and equipment standards you currently have in place to support resilience? Are those engineering and design requirements designed to address high-impact, low-frequency events? Do these requirements change by location or other factors?
- (m) To what extent do you consider whether specific challenges to resilience, such as extreme weather, drought, and physical or cyber threats, affect various generation technologies differently? If applicable, please explain how the different generation technologies used in your system perform in the face of these challenges.
- (n) To what extent are the challenges to the resilience of the bulk power system associated with the transmission system or distribution systems, rather than electric generation, and what could be done to further protect the transmission system from these challenges?
- (o) Over what time horizon should the resilience assessments discussed above be conducted, and how frequently should RTOs/ISOs conduct such an analysis? How could these studies inform planning or operations?
- (p) How do you coordinate with other RTOs/ISOs, Planning Coordinators, and other relevant stakeholders to identify potential resilience threats and mitigation needs?
- (q) Are there obstacles to obtaining the information necessary to assess threats to resilience? Is there a role for the Commission in addressing those obstacles?
- (r) Have you performed after-the-fact analyses of any high-impact, low-frequency events experienced in the past on your system? If so, please describe any recommendations in your analyses and whether they have or have not been implemented.

- (s) Please provide any other information that you believe the Commission would find helpful in its evaluation of the resilience of the RTO/ISO systems.

3. How RTOs/ISOs Mitigate Threats to Resilience

26. Once an RTO/ISO identifies a particular need or threat to resilience, there could be various ways to mitigate such risk. For example, RTO and ISO resource adequacy programs require reserve margins necessary to ensure adequate generation capacity to meet peak load conditions throughout the year. Further, RTO and ISO day-ahead and real-time markets generally secure and operate the transmission system assuming the loss of the largest vulnerable element at any given time. RTOs/ISOs may take additional actions to address concerns beyond the largest vulnerable element, such as procuring additional operating reserves. In 2014, for example, PJM implemented shortage pricing for operating reserves procured to respond to risks that could reasonably materialize and for which PJM's normal reserve procurement processes would not otherwise account.⁴¹ Further, all RTOs/ISOs have a residual unit commitment process to address regionally identified reliability considerations.⁴² Finally, resources that provide ancillary services, such as those with black-start capability, help ensure recovery from power-loss events without the need for auxiliary power from the grid.

27. In the submissions, we seek comment on how RTOs/ISOs evaluate options to mitigate any risks to grid resilience. We direct the RTOs/ISOs to answer the following questions on this topic:

- (a) Describe any existing operational policies or procedures you have in place to address specific identified threats to bulk power system resilience within your region. Identify each resilience threat (e.g., the potential for correlated generator outage events) and any operational policies and procedures to address the threat. Describe how these policies or procedures were developed in order to ensure their effectiveness in mitigating the identified risks and also describe any historical circumstances where you implemented these policies or procedures.
- (b) How do existing market-based mechanisms (e.g., capacity markets, scarcity pricing, or ancillary services) currently address these risks and support resilience?

⁴¹ *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,017 (2014).

⁴² *Staff Analysis of Operator-Initiated Commitments in RTO and ISO Markets*, Docket No. AD14-14-000 at 10-14 (Dec. 2014), available at <https://www.ferc.gov/legal/staff-reports/2014/AD14-14-operator-actions.pdf>.

(c) Are there other generation or transmission services that support resilience? If yes, please describe the service, how it supports resilience, and how it is procured.

(d) How do existing operating procedures, reliability standards (e.g., N-1 NERC TPL contingencies), and RTO/ISO planning processes (e.g., resource adequacy programs or regional transmission planning) currently consider and address resilience?

(e) Are there any market-based constructs, operating procedures, NERC reliability standards, or planning processes that should be modified to better address resilience? If so, please describe the potential modifications.

D. Conclusion

28. Promoting the resilience of the bulk power system is an important issue for the Commission. Each RTO/ISO should take a proactive stance on addressing and ensuring resilience. We are encouraged by efforts underway in PJM⁴³ and ISO-NE⁴⁴ to better understand vulnerabilities in their systems, and support similar efforts in other regions where analyses of potential resilience issues could be helpful. We also are encouraged by the ongoing work in MISO⁴⁵ to develop a long-term plan to address changing system needs in light of an evolving resource mix. At the heart of each of these initiatives is collaboration between RTOs/ISOs and their stakeholders, and we look forward to receiving stakeholder input on the submissions. As noted above, the topic of the new proceeding - resilience of the bulk power system - will remain a priority of the Commission and we expect to review the additional material and promptly decide whether additional Commission action on this issue is warranted.

⁴³ See *PJM's Evolving Resource Mix and System Reliability* *supra* note 35.

⁴⁴ See ISO-NE Initial Comments at 7 (“[T]he ISO has an upcoming process planned to quantify risks related to fuel security.”).

⁴⁵ See MISO Initial Comments at 8 (“MISO values discrete reliability attributes for generation resources through proven market-based mechanisms and continues to work with stakeholders on further market-based reliability improvements. Through its Market Roadmap, MISO is exploring several such initiatives...”).

The Commission orders:

(A) The RTOs/ISOs are hereby directed to provide responses to the Commission, as discussed in the body of this order, within 60 days of the date of this order. Interested entities may submit reply comments within 30 days of the due date of the RTO/ISO submissions.

(B) The proceeding in Docket No. RM18-1-000 is hereby terminated, as discussed in the body of this order.

By the Commission. Commissioners LaFleur, Chatterjee, and Glick are concurring with separate statements attached.

(S E A L)

Kimberly D. Bose,
Secretary.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Grid Reliability and Resilience Pricing

Docket Nos. RM18-1-000

Grid Resilience in Regional Transmission Organizations
and Independent System Operators

AD18-7-000

(Issued January 8, 2018)

LaFLEUR, Commissioner *concurring*:

Since I have been at the Commission, the reliability of the nation's electric system in serving customers has been my top priority. In my view, resilience — the ability to withstand or recover from disruptive events and keep serving customers — is unquestionably an element of reliability. Indeed, I believe it has already informed much of the Commission's work on both market rules and reliability standards.¹ As part of our continued work in this area, I support the Commission's action today to start a focused proceeding to explore how the RTOs/ISOs address the resilience of the grid in their respective regions, and whether there are additional steps the Commission should take to support resilience.

I also strongly support the decision not to adopt the rule proposed by the Secretary of Energy.² As explained below, as well as in Commissioner Glick's separate statement, I do not think the record demonstrates the need for the Proposed Rule to support resilience. Further, even had a resilience issue been demonstrated, I have serious concerns about the nature of the proposed remedy, which would address the issue not through market rules but through out-of-market payments to certain designated resources.

I write separately to expand on the larger context surrounding the issues in this docket, and how I believe the Commission should approach them going forward.

While the challenge of providing reliable energy is constant, the nature of the challenge has necessarily changed as the resources, infrastructure, and commercial and regulatory structures relied upon to meet that challenge have evolved. Even before the harnessing of electricity, the history of energy in this country has been one of continual

¹ See *Grid Reliability and Resilience Pricing*, 162 FERC ¶ 61,012, at P 12 (2018).

² Proposed Rule on Grid Reliability and Resilience Pricing, Docket No. RM18-1-000 (2017) (Proposed Rule). The full text of the Proposed Rule can be found at: <https://energy.gov/downloads/notice-proposed-rulemaking-grid-resiliency-pricing-rule>.

change and progress. We have moved from reliance on wood and local waterworks in the 19th century to the development of coal-fired steam generators and large-scale hydro in the first half of the 20th century. The mid-20th century saw the commercialization of nuclear generation, followed later in the century by the large-scale introduction of combined cycle gas generation and early-stage non-hydro renewables.

None of these changes in where the nation gets its energy were driven by this Commission or its predecessors. However, the Commission has played a role in adapting to technological change, ensuring that rates remained just and reasonable and customers were served reliably through successive generations and technological changes. Thus, in the late 20th century, responding to customer demands for access to new technologies and new generation choices, FERC oversaw the introduction of competitive wholesale power markets, which have continued to spread over the past 20 years to cover more than two-thirds of the nation's population. I am a strong supporter of competitive markets, which benefit customers by reducing costs, improving efficiency and innovation, and strengthening reliability by deploying resources over a broader footprint.

In the 21st century, against the backdrop of wholesale markets, the pace of technological change in energy has accelerated, resulting in a rapid transformation of the nation's resource mix. This has been driven by (1) the growth in the availability and affordability of domestic natural gas and its increased use for electric generation, (2) the rapid development and deployment of wind, solar, storage, and demand-side technologies, both central and distributed, and (3) a changing understanding of the environmental consequences of energy use, especially climate change, driving state and federal policy and customer choices.

With these new technologies have come changes in the location and operation of energy resources, their cost patterns, and the way grid operators plan their systems and deploy resources to keep the lights on. As with all transitions, there have been market winners and losers as new technologies have brought competitive pressures to bear on existing resources. Resource turnover is a natural consequence of markets, and the reduced prices that result from greater competition are a benefit to customers, not a problem to solve, unless reliability is compromised. Keeping up with these changes by ensuring that market tariffs and reliability standards sustain both reliability and just and reasonable rates in a time of changing resources has been a major focus of the Commission, and must continue to be.

As the recent Department of Energy grid study³ and numerous analyses by

³ *Staff Report to the Secretary on Electricity Markets and Reliability*, United States Department of Energy (August 2017), available at <https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20>

NERC⁴ have noted, the transformation of the resource mix to date has been accomplished without compromising reliability.⁵ However, ensuring that this continues to be the case requires continued diligence, and the inquiry we begin in this docket will support that ongoing effort.

Where the Commission has seen evidence of the need for greater system resilience in a changing resource mix, it has acted to ensure that such resilience was provided. It has generally done so by overseeing changes to market design (defining needed resource performance, and using competition to obtain it),⁶ interconnection agreements or other tariffs (requiring that certain essential reliability services be provided),⁷ or mandatory reliability standards.⁸ In each case, the Commission has recognized a customer need,

0Markets%20and%20Reliability 0.pdf.

⁴ *E.g., 2017 Long-term Reliability Assessment*, North American Electric Reliability Corporation (December 2017), *available at* http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_12132017_Final.pdf.

⁵ Indeed, as Commissioner Glick correctly notes in his concurrence, new resource additions have in some ways strengthened the resilience of the power system. For example, notwithstanding alleged concerns by some about the loss of fuel diversity, the resource mix in many regions of the country (such as that served by PJM Interconnection, L.L.C.) is more diverse than ever before as new technologies and resources are introduced.

⁶ *E.g., PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 (2015), *reh'g denied*, 155 FERC ¶ 61,157 (2016), *aff'd sub nom. Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656 (D.C. Cir. 2017) (approving market changes to compensate performance at times of system stress); *ISO New England Inc. and New England Pwr. Pool*, 147 FERC ¶ 61,172 (2014), *reh'g denied*, 153 FERC ¶ 61,223 (2015), *appeal pending sub nom. New England Power Generators Ass'n v. FERC*, No. 16-1023 (D.C. Cir. filed Jan. 19, 2016) (same); *Cal. Indep. Sys. Operator Corp.*, 156 FERC ¶ 61,226 (2016) (approving ramping products to complement increased variability and uncertainty); *Midcontinent Indep. Sys. Operator, Inc.*, 149 FERC ¶ 61,095 (2014) (same).

⁷ *E.g., Reactive Power Requirements for Non-Synchronous Generation*, Order No. 827, 81 Fed. Reg. 40,793 (June 23, 2016), FERC Stats. & Regs. ¶ 31,385 (2016); *Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities*, Order No. 828, 81 Fed. Reg. 50,290 (Aug. 1, 2016), 156 FERC ¶ 61,062 (2016).

⁸ *E.g., Frequency Response and Frequency Bias Setting Reliability Standard*,

Docket No. RM18-1-000, *et al.*

relied upon evidence to define it in a fuel-neutral way, and either allowed the market to transparently price it or established broad requirements to ensure that a needed service is provided. If the record that develops in this docket similarly demonstrates unmet resilience needs, I believe that the Commission should take a comparable approach.

Indeed, this preferred approach highlights one of my key objections to the Proposed Rule, which did not make a factual showing of a defined resilience need or allow a market or standards-based solution to solve that need. Rather, it presumed a resilience need and proposed a far-reaching out-of-market approach to “solve” it. This proposed remedy, which simply designated resources for support rather than determining what services needed to be provided, would be highly damaging to the ability of the market to meet customer needs—including any demonstrated resilience needs—fairly, efficiently, and transparently. In effect, it sought to freeze yesterday’s resources in place indefinitely, rather than adapting resilience to the resources that the market is selecting today or toward which it is trending in the future.

I believe the Commission should continue to focus its efforts not on slowing the transition from the past but on easing the transition to the future. We must continue to guide grid operators in sustaining reliability and resilience within a system that is likely to be cleaner, more dynamic, in some instances more distributed, and deployed by an efficient market for the benefit of customers. In this way, we can help the grid adapt to the transformations of the present, and best position the grid for the unknown future transformations that the history of our industry suggests are inevitable. For these reasons, I respectfully concur.

Cheryl A. LaFleur
Commissioner

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Grid Reliability and Resilience Pricing

Docket Nos. RM18-1-000

Grid Resilience in Regional Transmission
Organizations and Independent System Operators

AD18-7-000

(Issued January 8, 2018)

CHATTERJEE, Commissioner, *concurring*:

I concur in this order with the expectation that it is only the first step in a more systematic effort by the Commission, over both the near and long term, to ensure the resilience of the nation's bulk power system. The success of this effort will require the Commission's continued vigilance and willingness to take, within the bounds of its statutory authority, prompt, proactive, and decisive measures to safeguard resilience.

I applaud Secretary Perry's bold leadership in jump-starting a national conversation on this urgent challenge. Given the importance of the bulk power system to our nation's security, economic stability, and public health and safety, we must ensure its resilience amidst tremendous changes in our generation resource mix. My goal throughout this proceeding has been to ensure that we do not later come to regret failing to ask the difficult questions. I believe that the order we are issuing today is a positive step toward that goal. I look forward to receiving responses to the questions posed to the RTOs/ISOs, and comments from interested entities.

Nevertheless, I must voice my concerns regarding bulk power system resilience in the interim period prior to the conclusion of the proceeding we initiate today. Major regulatory reform efforts often can take several years to complete. But I believe that the record compiled in this proceeding speaks to the prudence of considering, as soon as practicable, whether interim measures may be needed to avoid near-term bulk power system resilience challenges that could result from the rapid, unprecedented changes in our generation resource mix.

The scale and pace of those changes are staggering. Between 2014 and 2015 alone, the U.S. added approximately 15,800 megawatts (MW) of natural gas, 13,000 MW of wind, 6,200 MW of utility scale solar photovoltaic, and 3,600 MW of distributed solar photovoltaic generating capacity.¹ Meanwhile, nearly 42,000 MW of synchronous

¹ U.S. Energy Information Administration, *Electricity, available at*

generating capacity (e.g., coal, nuclear, and natural gas) retired between 2011 and 2014, with an additional seven nuclear units (representing 10,500 MW of nameplate capacity) planning retirement by 2025.² Commenters express an expectation that those trends will continue in the years ahead, with many nuclear and coal units particularly at risk of economic retirement despite their significant contribution to bulk power system resilience.³

The changing generation resource mix underscores the need to consider whether near-term measures are warranted notwithstanding the actions the Commission has taken in recent years that are outlined in today's order. Specifically, current RTO/ISO market design mechanisms are intended to incent generation resource owners to manage the fuel supply risks they can control -- not the spectrum of fuel supply risks beyond their control.⁴ The record clearly suggests that the latter class of risks are increasingly significant due to shifts in the generation mix and the fast-evolving national security threat environment.⁵ Neither current RTO/ISO tariffs nor the NERC Reliability

<https://www.eia.gov/electricity/annual/backissues.html>.

² *Id.*; NERC Comments, Docket No. RM18-1-000, at 4-5 (filed Oct. 23, 2017).

³ *See, e.g.*, Reply Comments of Peabody Energy Corporation, Docket No. RM18-1-000, at 10 (filed Nov. 7, 2017); Reply Comments of the Nuclear Energy Institute, Docket No. RM18-1-000, at 6-11 (filed Nov. 7, 2017); *see also* NERC Comments at 4-6 (noting the resilience contributions of coal and nuclear generation's dependable capacity, inertia and voltage control services, and fuel security).

⁴ The Commission has approved market constructs providing financial incentives for resource owners to procure firm fuel arrangements either through firm pipeline capacity or dual fuel capability. *See, e.g., ISO New England Inc.*, 147 FERC ¶ 61,172, at P 36 (2014) (endorsing pay-for-performance program); *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at P 22 (2015) (approving PJM's capacity performance construct). *See also Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008), *order on reh'g*, Order No. 719-A, FERC Stats. & Regs. ¶ 31,292 (2009), *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009) (requiring RTO/ISO scarcity pricing that incents firm fuel arrangements). But generation resource owners relying on fuels delivered "just-in-time" from offsite supplies are not capable of managing risks to (1) the infrastructure that transports these fuels (e.g., pipelines); and (2) the infrastructure that supplies these fuels (e.g., natural gas wellheads).

⁵ *See, e.g.*, Exelon Corporation Comments, Docket No. RM18-1-000, Stockton Test. at 5-6, 13 (filed Oct. 23, 2017); *see also* Congressional Research Service, Pipeline Cybersecurity: Federal Policy (Apr. 19, 2016).

Standards require RTOs/ISOs to assess these fuel supply risks or other significant resilience risks and mitigate their potentially significant impact on the bulk-power system. This suggests that existing RTO/ISO tariffs may be unjust and unreasonable insofar as they may not adequately compensate resources for their contributions to bulk power system resilience.

Consequently, I believe it would have been prudent, in addition to establishing the proceeding in Docket No. AD18-7-000, for the Commission to issue an order to show cause pursuant to section 206 of the Federal Power Act directing each RTO/ISO to either (1) submit tariff revisions to provide interim compensation for existing generation resources that may provide necessary resilience attributes and are at risk of retirement before the conclusion of the proceeding established today or (2) show cause why it should not be required to do so.

Given the nascence of the Commission's effort to more systematically examine resilience, I believe that it would have been appropriate to provide the RTOs/ISOs with latitude in determining the implementation of any interim measures needed. In particular, I would have allowed RTOs/ISOs to define which resources provide necessary resilience attributes and are at risk of retirement before the conclusion of the proceeding initiated in Docket No. AD18-7-000. Because of their detailed knowledge of their own systems, the RTOs/ISOs are well-positioned to understand the specific resilience risks in their footprints, to identify the resilience attributes that would most effectively mitigate those risks, and to tailor appropriate tariff mechanisms to meet their needs. Such an approach would have struck an appropriate balance to remedy any potentially unjust and unreasonable compensation practices while minimizing the impact on consumers and markets as the Commission considered longer-term reforms. In addition, such an approach also would have reduced the probability of retirement of resources which subsequently were determined to be the most cost-effective means of providing necessary resilience attributes.

The Commission previously has stressed its preference for market-based mechanisms as a means to ensure just and reasonable rates in jurisdictional organized markets. I share this preference for market-based solutions and would have urged RTOs/ISOs to identify market mechanisms to address these concerns. However, the Commission also has recognized that interim, out-of-market solutions might be appropriate in certain circumstances.⁶ Accordingly, I would have required that tariff

⁶ See *ISO New England Inc.*, 144 FERC ¶ 61,204 at P 21 (accepting ISO-NE tariff provisions to provide for short-term out-of-market payments to resources to ensure reliability in the 2013-2014 winter period); see also *N.Y. Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,116 at P 2 ("While the Commission has repeatedly stated that our jurisdictional markets should utilize market mechanisms to ensure that the resulting rates are just and reasonable, the Commission has also recognized that short-term remedies,

revisions proposed by the RTOs/ISOs endeavor to minimize the effect on the wholesale markets (in particular the energy markets). To this end, I would have stated an expectation that each RTO/ISO develop any out-of-market mechanisms only as a last resort.

As I explained consistently over the past few months, it was my goal that any effort with respect to an interim step would be legally defensible, would not distort markets, and would address the issues Secretary Perry raised. I believe an order as discussed above would have met that goal. And while I would have preferred such an order, I am nevertheless encouraged by today's order, which represents a positive step forward in addressing these critical issues.

For these reasons, I respectfully concur.

Neil Chatterjee, Commissioner

such as RMR agreements, may be appropriate in certain circumstances to address an immediate problem at hand."").

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Grid Reliability and Resilience Pricing

Docket Nos. RM18-1-000

Grid Resilience in Regional Transmission Organizations
and Independent System Operators

AD18-7-000

(Issued January 8, 2018)

GLICK, Commissioner, *concurring*:

I fully support the Commission's action today to initiate a new proceeding examining the resilience of the bulk power system. I commend the Chairman for his leadership in guiding the Commission as it addresses this difficult, but important issue. I also support the Commission's decision to terminate Docket No. RM18-1-000, which addressed the Proposed Rule on Grid Reliability and Resilience Pricing (Proposed Rule) submitted to the Commission by the Secretary of the Department of Energy. The Proposed Rule had little, if anything, to do with resilience, and was instead aimed at subsidizing certain uncompetitive electric generation technologies. As my colleague Commissioner LaFleur explains, it is important to consider the resilience of the bulk power system in a larger context that accounts for the changing electricity industry rather than seeking to preserve the *status quo*.

I write separately to explain my rationale for concluding that the Proposed Rule is inconsistent with the Commission's statutory responsibilities. Although the Department had the authority under Section 403 of the Department of Energy Organization Act¹ to submit the Proposed Rule, the Commission could adopt the proposal only if it met the requirements of section 206² of the Federal Power Act. The Proposed Rule fails to meet that standard.

As today's order recognizes, the record in this proceeding—as well as the other proceedings referenced by the Department³—does not support the Department's

¹ 42 U.S.C. § 7173 (2012).

² 16 U.S.C. § 824e (2012).

³ *Grid Resiliency Pricing Rule*, 82 Fed. Reg. 46,940, 46,944-45 (2017).

contention that the tariffs of certain RTOs and ISOs are unjust and unreasonable or unduly discriminatory or preferential. The Department's own staff Grid Study concluded that changes in the generation mix, including the retirement of coal and nuclear generators, have not diminished the grid's reliability or otherwise posed a significant and immediate threat to the resilience of the electric grid.⁴ To the contrary, the addition of a diverse array of generation resources, including natural gas, solar, wind, and geothermal, as well as maturing technologies, such as energy storage, distributed generation, and demand response, have in many respects contributed to the resilience of the bulk power system. The record in this proceeding does not demonstrate any need for the Commission to interfere with the continued evolution of the bulk power system.

Nor does the record support the Department's proposed remedy: A multi-billion dollar bailout targeted at coal and nuclear generating facilities.⁵ There is no evidence in the record to suggest that temporarily delaying the retirement of uncompetitive coal and nuclear generators would meaningfully improve the resilience of the grid. Rather, the record demonstrates that, if a threat to grid resilience exists, the threat lies mostly with the transmission and distribution systems, where virtually all significant disruptions occur.⁶ It is, after all, those systems that have faced the most significant challenges during extreme weather events.

⁴ *Staff Report to the Secretary on Electricity Markets and Reliability*, United States Department of Energy at 63, 100 (Aug. 2017), available at https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf (Department of Energy Grid Study).

⁵ See, e.g., PJM Independent Market Monitor Comments at 5 (estimating that the Proposed Rule would have cost consumers in PJM an additional \$30 billion in 2015 and \$32 billion in 2016); Joint Industry Commenters, Attachment A at 2, 32 (Battle Group report estimating that the Proposed Rule would result in \$3.7 billion to \$11.2 billion in out-of-market payments annually in PJM, ISO-NE, and NYISO); see also Electricity Consumers Resource Council Reply Comments at 11-15 (summarizing cost estimates submitted to the record, all of which estimated that the Proposed Rule would cost consumers billions of dollars).

⁶ See Joint Industry Commenters at 3 (citing a Rhodium Group study showing that "0.00007% of customer-hours lost to outage were caused by fuel supply emergencies between 2012-2016," a period that included the 2014 Polar Vortex); Department of Energy, Quadrennial Energy Review, Second Installment at 4-2 (2017) available at <https://energy.gov/sites/prod/files/2017/02/f34/Chapter%20IV--Ensuring%20Electricity%20System%20Reliability%2C%20Security%2C%20and%20Resilience.pdf> ("Electricity outages disproportionately stem from disruptions on the

In addition, coal and nuclear generators face resilience challenges of their own. As has been well-documented, many coal and nuclear plants with significant on-site fuel supplies have failed to function during extreme weather events because those fuel supplies froze, flooded, or were otherwise unavailable.⁷ In fact, initial reports indicate that coal-fired facilities accounted for nearly half of all forced outages in PJM during last week's period of extreme temperatures. Similarly, during the same period, the Pilgrim Nuclear Power Station was manually removed from service complicating efforts to serve load within ISO-NE. And, even when fully operational, many coal and nuclear generators are incapable of providing all the NERC-defined essential reliability services.⁸ It is perhaps for that reason that the Department's Grid Study recommended pursuing "wholesale market and product designs that recognize and complement resource diversity by compensating providers for the value of [essential reliability services] on a *technology-neutral* basis."⁹

Finally, I am sympathetic to the plight of coal miners, who have been disproportionately affected as coal's share of the generation mix has declined. These men and women went to work every day, at considerable risk to their health and safety, to supply coal when it was needed most. Many of those same considerations extend to individuals employed at recently or soon-to-be decommissioned nuclear power plants.

distribution system (over 90 percent of electric power interruptions), both in terms of the duration and frequency of outages. . . . Damage to the transmission system, while infrequent, can result in more widespread major power outages that affect large numbers of customers with significant economic consequences.").

⁷ For example, more than 15 gigawatts of coal and nuclear capacity were forced offline during the 2014 Polar Vortex as temperatures fell below those plants' operating thresholds. Electric Power Supply Association Comments, Attachment A at 17. Similarly, nuclear facilities lying in the path of hurricanes are routinely taken offline as a precaution and not returned to service until after the threat has passed.

⁸ Department of Energy Grid Study at 71-72 (citing Joseph H. Eto *et al.*, Lawrence Berkeley National Laboratory, Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation (2010), *available at* <https://www.ferc.gov/industries/electric/indus-act/reliability/frequencyresponsemetrics-report.pdf>). The cited report explains that when nuclear plants and large coal plants are operated at maximum output, as they frequently are, they will be incapable of providing primary frequency response, one of the essential reliability services identified by NERC.

⁹ Department of Energy Grid Study at 100 (emphasis added).

We have a history in this country of helping those who, through no fault of their own, have been adversely affected by technological and market change. But that is the responsibility of Congress and the state legislatures. It is not a role that the Federal Power Act provides to the Commission.

* * *

I agree with the Commission's decision to initiate a comprehensive examination of the resilience of the bulk power system in the form of today's order. Utilities face diverse challenges, including the threat of cyber or physical attacks and natural disasters, such as the extreme weather events that are occurring more frequently as a result of climate change. It is not without irony that the Department's Proposed Rule would exacerbate the intensity and frequency of these extreme weather events by helping to forestall the retirement of coal-fired generators, which emit significant quantities of greenhouse gases that contribute to anthropogenic climate change.¹⁰ I encourage the RTOs and ISOs to use this opportunity to undertake a serious review of these challenges along with other concerns regarding the resilience of their system.

In addition, RTOs and ISOs should consider how best to mitigate these challenges *within* their markets and *without* prejudging what technology or fuel-type provides the best solution. In particular, I urge them to consider carefully the Commission's questions regarding how different generation technologies—both traditional technologies and newer, less widespread technologies—perform when faced with extreme weather, including droughts. I also believe that it is important to consider the advantages that newer technologies, such as distributed energy resources, energy storage, and micro-grids, may offer in addressing resilience challenges to the bulk power system. Similarly, I urge the RTOs and ISOs to consider carefully the Commission's question regarding the extent to which resilience challenges are associated with the transmission system or distribution systems, rather than electric generation. As I noted, the transmission and distribution systems have historically been the principal cause of virtually all significant disruptions and are, therefore, an important element of any examination into the resilience of the bulk power system. Finally, I agree with the Commission that is important to explore the concept of correlated outages and, in particular, the extent to

¹⁰ A research paper submitted to the record by Resources for the Future estimates that adopting the Proposed Rule would result in an additional 53 million tons of CO₂ emissions by 2045. Resources for the Future also estimates that the Proposed Rule would cause 27,000 premature deaths by 2045 by increasing the emissions of other air pollutants (NO_x and SO_x). See Daniel Shawhan and Paul Picciano, Resources for the Future, Costs and Benefits of Saving Unprofitable Generators: A Simulation Case Study for US Coal and Nuclear Power Plants at 11 (Nov. 2017).

which the cyber and physical security of natural gas pipelines threatens the resilience of the bulk power system and how the Commission should address this issue.

In conclusion, I am confident that the Commission will approach this new examination into the resilience of the bulk power system in the same manner it considers all other matters—with a non-partisan perspective and with a view solely on what the facts provide and the law requires. If the RTOs and ISOs demonstrate that the resilience of the bulk power system is threatened we should act. If not, we should move on.

For these reasons, I respectfully concur.

Richard Glick
Commissioner

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WHITE HOUSE

Presidential limits: Trump can't come through for coal

Peter Behr and Saqib Rahim, E&E News reporters

Published: Wednesday, August 23, 2017

"Tell Cohn to do whatever these two want him to do."

This secondhand account of President Trump's directions on rescuing Ohio power utility FirstEnergy Corp. and its coal supplier, Murray Energy Corp., sounded like a boss talking. As president, it didn't work.

In an Aug. 4 letter obtained by the Associated Press, Robert Murray, chairman and CEO of Murray Energy, described a conversation with the president in which Trump ordered an aide to see that Gary Cohn, director of the White House National Economic Council, gave Murray and Charles Jones, CEO of FirstEnergy "whatever" they were asking for.

As the letter spells out in detail, unchallenged by the White House or Murray's company, Murray pleaded for a federal rescue for the Ohio utility's FirstEnergy Solutions merchant coal-fired generating plants, which stood "on the verge of bankruptcy."

"Their bankruptcy will force Murray Energy Corp. into immediate bankruptcy, promptly terminating our 6,500 coal mining jobs," with devastating losses to those coal communities, Murray said. "This would be a disaster for President Trump and for our coal miners and employees" (*E&E News PM*, Aug. 22).

But Trump could not deliver for the men he called "my coal miners," nor for Murray, one of his most outspoken political supporters. Murray was not one of the corporate CEOs who broke with Trump over the president's equivocal comments on the violence in Charlottesville, Va. Instead, he was an ally who said he was "praying and pacing the floor" election night, hoping for a Trump victory (*Greenwire*, Feb. 17).

In his letter to Trump White House aide John McEntee III, Murray said he had heard Trump direct Energy Secretary Rick Perry three times to rescue the companies, which sought a federal moratorium on further closings of Ohio coal-fired power plants. Murray quoted Trump saying, "I want this done."

But the only lever available to Perry — an action under Section 202(C) of the Federal Power Act — is restricted to short-term actions in response to emergencies that threaten power grid reliability or power delivery, not the chronic plight of coal plants that cannot compete with turbine generators running on cheap Ohio and Pennsylvania shale gas.

The history of this Power Act provision showed it to be an emergency remedy. Perry had ordered the Grand River Dam Authority in Oklahoma to keep operating a facility in April to provide voltage support for the nearby power grid, until replacement generation was available. It was invoked in 2008 in response to grid damage along the Gulf Coast from Hurricane Ike, in 2005 after Hurricane Rita, in 2003 following a blackout in the Northeast, and in 2000 to deal with the California energy crisis.

DOE spokeswoman Shaylyn Hynes said in a statement to the Associated Press, "We look at the facts of each issue and consider the authorities we have to address them, but with respect to this particular case at this particular time, the White House and the Department of Energy are in agreement that the evidence does not warrant the use of this emergency authority."

Melissa Powers, an associate law professor at Lewis & Clark Law School, said Murray's letter was "self-defeating," considering the help he was asking for.

"A letter that begins with a reference to President Trump telling an agency official to 'do whatever these two [Murray and the FirstEnergy CEO] want him to do' is exactly NOT the letter I would want to rely on in an administrative proceeding," she said. The letter focuses on impacts on the companies, not on grid reliability imperatives, Powers said.

John Moore, director of the Natural Resources Defense Council's Sustainable FERC Project, and NRDC clean energy attorney Miles Farmer commented in a blog that DOE's regulations make clear that the emergency authority is limited to "unexpected inadequate supply of electric energy," such as would be caused by "the unexpected outage of facilities" from events like "weather conditions" or "acts of God."

An emergency order would have had symbolic value at first. But what would be the benefit of ordering coal-fired power plants to keep operating when the administration cannot order utilities to buy their electricity — costing more than competitive power from gas generation?

When Trump ordered help for Murray and the coal industry, he appeared to be “following his instincts,” as he said he always liked to do as a boss.

But Trump this week, speaking about Afghanistan, said he realizes that decisions are different “when you sit behind the desk in the Oval Office. In other words, when you’re president of the United States.”

As he sat behind that same desk, should Trump have been told that Murray’s request couldn’t be met? Was he improperly briefed? Was he briefed and then ignored aides, or did he make promises he knew he couldn’t keep?

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Coal CEO Says Bailout No Longer Needed

**Minergy Energy chief
credits recovery in
markets to Asia
for business revival**

**By Timothy Farn
And Alexander Koppa**

Coal industry bailout hearings after months of testimony could be over and the industry could be back to work. Minergy CEO says the industry's recovery is due to a rebound from historical lows, not a bailout. The company's business is now up from a low of \$100 million in 2007 to \$1.5 billion in 2008, according to the company's chief executive officer, John W. Wink.

Mr. Wink says that the company's recovery is due to a rebound from historical lows, not a bailout. The company's business is now up from a low of \$100 million in 2007 to \$1.5 billion in 2008, according to the company's chief executive officer, John W. Wink.

Minergy Energy also is expected to be a major player in the coal industry's recovery. The company's business is now up from a low of \$100 million in 2007 to \$1.5 billion in 2008, according to the company's chief executive officer, John W. Wink.

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Minergy Energy CEO John Wink, right, and executives of the company stand in front of a coal mine. Wink, right, and executives of the company stand in front of a coal mine.

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Utility Says Power Plants Will Stay Open During Bankruptcy

Attorneys for FirstEnergy Solutions say the company's coal and nuclear power plants will keep producing electricity while the company undergoes reorganization under bankruptcy.

April 4, 2018, at 10:32 a.m.

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AP

AKRON, Ohio (AP) — Attorneys for FirstEnergy Solutions say the company's coal and nuclear power plants will keep producing electricity while the company undergoes reorganization under bankruptcy.

The FirstEnergy Corp. subsidiary told a U.S. Bankruptcy Court judge in Akron that it should have enough money to remain operating and pay its employees during the reorganization.

FirstEnergy Solutions said while filing for bankruptcy protection on Saturday that it faces billions of dollars in debt and increasing pressure from natural gas power plants.

The company operates two nuclear plants in [Ohio \(/news/best-states/ohio\)](/news/best-states/ohio) and one in [Pennsylvania \(/news/best-states/pennsylvania\)](/news/best-states/pennsylvania). It also has coal-fired power plants in both states.

But FirstEnergy Solutions said Tuesday that the long-term future of the plants remains in question.

Last week, the utility said it intends to shut down its nuclear plants within three years.

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FirstEnergy Solutions bankruptcy could take years; consumer impact review begins

Published: April 7, 2018 - 6:40 PM | Updated: April 7, 2018 - 11:06 PM

By Jim Mackinnon

Beacon Journal/Ohio.com

The FirstEnergy Solutions Corp. court case, involving some 14,000 creditors, billions of dollars in debt, a small army of lawyers, plus putting at stake the future of nuclear and coal power plants, could take years to resolve, says a local bankruptcy lawyer.

Meanwhile, efforts have started to look into how consumers may be impacted as the unregulated generation arm of Akron electric utility FirstEnergy Corp. goes through the early stages of the Chapter 11 bankruptcy process.

FirstEnergy Solutions filed for bankruptcy protection in Akron on March 31, which allows it to continue operating while undergoing a court-supervised reorganization. The FirstEnergy subsidiary operates two nuclear power plants in Ohio and one in Pennsylvania, as well as coal-fired power plants.

The bankruptcy filing was hinted as coming as far back as November 2016, when parent FirstEnergy Corp. said it planned to become a fully regulated utility and was looking to sell off power plants and debt-laden FirstEnergy Solutions.

There probably won't be a quick resolution to the complex case, said one legal onlooker.

"It can take, on the short end, five or six years [to resolve]. I would think it can

4/9/2018

FirstEnergy Solutions bankruptcy could take years; consumer impact review begins

take longer than that, said Joseph Ferrise, staff attorney for the downtown Akron office of the Chapter 13 trustee, who oversees local individual bankruptcy cases. Ferrise also teaches law classes, including on bankruptcy, at the University of Akron.

Critical documents

With the initial April 3 court hearing behind it, FirstEnergy Solutions now will have about 18 months to file two critical bankruptcy documents, Ferrise said.

The first document will be a disclosure statement that lists assets, liabilities and more, much of it redundant information from other filings, he said. Creditors need the document to make informed business decisions.

The other critical document will be FirstEnergy Solutions' plan of reorganization, he said. It will show, among other things, how much FirstEnergy Solutions intends to pay creditors — and creditors likely will contest at least some of what the plan proposes, Ferrise said.

While one industry analyst last week said parent FirstEnergy Corp. could decide to pay as much as \$2.7 billion to try to quickly resolve the bankruptcy, Ferrise indicated he did not think that was likely — and added if FirstEnergy decided that was its best option, the process could still take years.

The bankruptcy will rack up significant legal expenses, he said. Some of the numerous lawyers involved make as much as \$700 to \$900 an hour, he said.

The end result of the Chapter 11 process will ultimately be a stronger FirstEnergy that is positioned for decades of good financial health and performance, Ferrise said.

"I'm a homer. I hope this goes well," he said. "I think that's a viable and reasonable thing to expect."

U.S. Bankruptcy Judge Alan M. Koschik, who is overseeing the case, is well qualified for the task, Ferrise said. Koschik's background includes previous work as a Chapter 11 bankruptcy attorney.

"He is in his element. He's going to have a real good feel for this case," Ferrise said.

Customers must wait

Residential and business electricity customers of FirstEnergy may also have to wait a while to see how the Chapter 11 bankruptcy could impact their

4/9/2018

FirstEnergy Solutions bankruptcy could take years; consumer impact review begins
wait a while to see how the Chapter 11 bankruptcy could impact their
pocketbooks.

The Public Utilities Commission of Ohio last week opened a case on its docket seeking to protect Ohio consumers from any adverse impact from the FirstEnergy Solutions bankruptcy filing.

The PUCO has said the bankruptcy will not cause anyone to go without electricity because of measures in place to ensure the continued delivery of power. Ohio law requires local utilities to step in and supply electricity in case a supplier is unable to fulfill its contractual responsibilities.

In its April 4 filing, the PUCO said it cannot guarantee that contracts entered into by FirstEnergy Solutions prior to the bankruptcy filing will not be impacted.

The PUCO filing directs FirstEnergy Solutions to file a report by May 4 saying, among other things, whether it will be able to continue to serve existing retail customers including government aggregations, and to disclose any other material changes.

The Ohio Consumers' Counsel office said it will file comments for consumer protection in the PUCO case.

"FirstEnergy Solutions has proposed in its bankruptcy filing to continue to honor the contracts it has with its customers," the OCC said Friday. "The FirstEnergy utilities known as Cleveland Electric Illuminating, Ohio Edison and Toledo Edison are not part of the bankruptcy and their rates are unaffected."

A FirstEnergy Solutions spokeswoman in early March said bankruptcies largely involve creditors and have little impact on residential customers.

FirstEnergy Solutions cited costly environmental requirements, weak electricity demand and strong competition from cheap, fracked natural gas and renewable energy sources as reasons for needing to reorganize under Chapter 11. The company has 3,076 employees, most of whom work at the power plants, with 118 employees in Akron.

Days prior to the bankruptcy filing, FirstEnergy Solutions told the federal government it intends to shut down and decommission its three nuclear plants, at an estimated cost of more than \$1.8 billion, by 2021. It asked President Donald Trump's administration to intervene to keep the plants running.

While in West Virginia on Thursday, Trump said his administration will look into using emergency powers to keep coal and nuclear plants open. He did not name FirstEnergy in the off-the-cuff comments, which came a day after a private

4/9/2018

FirstEnergy Solutions bankruptcy could take years; consumer impact review begins
FirstEnergy in the on-the-run comments, which came a day after a private dinner meeting with a FirstEnergy lobbyist.

The next regularly scheduled hearing for FirstEnergy Solutions in U.S. Bankruptcy Court in Akron is 9 a.m. April 26.

Reporter Jim Mackinnon covers business and county government. He can be reached at 330-996-3544 or jmackinnon@thebeaconjournal.com. Follow him @JimMackinnonABJ on Twitter or <http://www.facebook.com/JimMackinnonABJ>

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Unit Name	Capacity	Fuel Type	Reliability Must Run (RMR)
Beaver Valley U1 Nuclear Generating Unit	909	Nuclear	No
Beaver Valley U2 Nuclear Generating Unit	902	Nuclear	No
Davis Besse U1 Nuclear Generating Unit	896	Nuclear	No
Perry U1 Nuclear Generating Unit	1247	Nuclear	No
Hopewell James River Cogeneration	92	Coal	No
Laurel Mountain Battery Storage	0	Battery	No
Reichs Ford Road Landfill Generator	1.7	Methane	No
Bayonne Cogen Plant (CC)	163	Natural Gas	No
Morris Landfill Generator	1.9	Methane	No
Pleasants Power Station U1	639	Coal	No
Pleasants Power Station U2	639	Coal	No
Evergreen Power United Corstack	25	Biomass	No
Oyster Creek Nuclear Generating Station	607.7	Nuclear	No
Marcus Hook Refinery Co-gen (MH50) {Sun Oil}	49.6	Natural Gas	No
Bellemeade	265.7	Natural Gas	No
Bremo 3	71	Natural Gas	No
Bremo 4	156	Natural Gas	No
Buggs Island 1 (Mecklenberg)	69	Coal	No
Buggs Island 2 (Mecklenberg)	69	Coal	No
Chesterfield 3	100	Coal	No
Chesterfield 4	162.1	Coal	No
Possum Point 3	96.7	Natural Gas	No
Possum Point 4	221	Natural Gas	No
Colver NUG	110	Coal	No
Crane 1	190	Coal	No
Crane 2	195	Coal	No
Crane GT1	14	Oil	No
Three Mile Island Unit 1	802.8	Nuclear	No
Edgecomb NUG	116	Coal	No
Spruance NUG 1	116	Coal	No
Spruance NUG 2	86	Coal	No
Killen 2	600	Coal	No
Killen GT1	18	Oil	No
Stuart 2 (joint owned unit)	580	Coal	No
Stuart 3 (joint owned unit)	580.4	Coal	No
Stuart 4 (joint owned unit)	577	Coal	No
Stuart Diesels 1-4	9.2	Oil	No
BL England 2	155	Coal	Yes
Bay Shore 1	136	Other	No
W H Sammis 2	160	Coal	No
W H Sammis 3	176	Coal	No
W H Sammis 4	172.6	Coal	No
W M Sammis 1	160	Coal	No
Sewaren 1	102.8	Natural Gas	No
Sewaren 2	118	Natural Gas	No
Sewaren 3	106.2	Natural Gas	No

Sewaren 4	123.6	Natural Gas	No
Elmer Smith Unit 1	52	Coal	No
Wagner 2	135	Coal	No
Yorktown 2	165	Coal	Yes
Yorktown 1	159	Coal	Yes

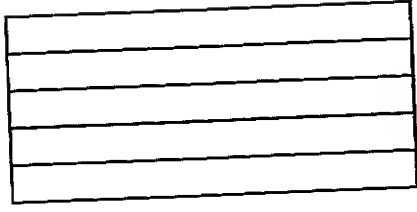
Status	State	Age	Transmission Owner Zone	Owner Notification Date
Future Deactivation	Pennsylvania	42	DL	3/28/2018
Future Deactivation	Pennsylvania	31	DL	3/28/2018
Future Deactivation	Ohio	41	ATSI	3/28/2018
Future Deactivation	Ohio	31	ATSI	3/28/2018
Future Deactivation	Virginia	28	Dominion	3/14/2018
Future Deactivation	West Virginia	6	APS	3/14/2018
Future Deactivation	Maryland	9	APS	3/1/2018
Future Deactivation	New Jersey	12	PSEG	2/28/2018
Future Deactivation	Illinois	17	ComEd	2/16/2018
Future Deactivation	West Virginia	38	APS	2/16/2018
Future Deactivation	West Virginia	38	APS	2/16/2018
Future Deactivation	Pennsylvania	8	ME	2/2/2018
Future Deactivation	New Jersey	46	JCPL	2/2/2018
Future Deactivation	Pennsylvania	28	PECO	1/17/2018
Future Deactivation	Virginia	21	Dominion	1/16/2018
Future Deactivation	Virginia	68	Dominion	1/16/2018
Future Deactivation	Virginia	60	Dominion	1/16/2018
Future Deactivation	Virginia	26	Dominion	1/16/2018
Future Deactivation	Virginia	26	Dominion	1/16/2018
Future Deactivation	Virginia	66	Dominion	1/16/2018
Future Deactivation	Virginia	58	Dominion	1/16/2018
Future Deactivation	Virginia	63	Dominion	1/16/2018
Future Deactivation	Virginia	56	Dominion	1/16/2018
Future Deactivation	Pennsylvania	22	PENELEC	11/22/2017
Future Deactivation	Maryland	55	BGE	10/27/2017
Future Deactivation	Maryland	53	BGE	10/27/2017
Future Deactivation	Maryland	49	BGE	10/27/2017
Future Deactivation	Pennsylvania	43	ME	5/30/2017
Future Deactivation	North Carolina	27	Dominion	4/18/2017
Future Deactivation	Virginia	25	Dominion	4/18/2017
Future Deactivation	Virginia	25	Dominion	4/18/2017
Future Deactivation	Ohio	35	Dayton	3/17/2017
Future Deactivation	Ohio	35	Dayton	3/17/2017
Future Deactivation	Ohio	47	Dayton	3/17/2017
Future Deactivation	Ohio	45	Dayton	3/17/2017
Future Deactivation	Ohio	43	Dayton	3/17/2017
Future Deactivation	Ohio	48	Dayton	3/17/2017
Future Deactivation	New Jersey	52	ACE	12/28/2016
Future Deactivation	Ohio	61	ATSI	7/22/2016
Future Deactivation	Ohio	56	ATSI	7/22/2016
Future Deactivation	Ohio	55	ATSI	7/22/2016
Future Deactivation	Ohio	54	ATSI	7/22/2016
Future Deactivation	Ohio	57	ATSI	7/22/2016
Future Deactivation	New Jersey	67	PSEG	1/12/2016
Future Deactivation	New Jersey	67	PSEG	1/12/2016
Future Deactivation	New Jersey	66	PSEG	1/12/2016

Future Deactivation	New Jersey	64	PSEG	1/12/2016
Future Deactivation	Kentucky	51	External	11/30/2015
Future Deactivation	Maryland	56	BGE	6/16/2015
Future Deactivation	Virginia	53	Dominion	10/9/2012
Future Deactivation	Virginia	54	Dominion	11/7/2011

Requested Deactivation Date	Projected Deactivation Date	Actual Deactivation Date
5/31/2021	5/31/2021	
10/31/2021	10/31/2021	
5/31/2020	5/31/2020	
5/31/2021	5/31/2021	
3/31/2019	3/31/2019	
6/6/2018	6/6/2018	
5/31/2018	5/31/2018	
6/1/2018	6/1/2018	
5/31/2018	5/31/2018	
1/1/2019	1/1/2019	
1/1/2019	1/1/2019	
5/3/2018	4/30/2018	
10/1/2018	10/1/2018	
6/1/2019	6/1/2019	
4/16/2018	4/16/2018	
4/16/2018	4/16/2018	
4/16/2018	4/16/2018	
4/16/2018	4/16/2018	
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12/1/2018	12/1/2018	
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9/1/2020	9/1/2020	
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5/31/2020	5/31/2020	
5/31/2020	5/31/2020	
6/1/2018	6/1/2018	
6/1/2018	6/1/2018	
6/1/2018	6/1/2018	

6/1/2018	6/1/2018	
6/1/2019	6/1/2019	
6/1/2020	6/1/2020	
6/11/2018	6/11/2018	
6/11/2018	6/11/2018	

[illegible]



Reliability analysis complete; no impacts identified
Reliability analysis complete; no impacts identified
Reliability analysis complete; no impacts identified
Reliability issue identified
Reliability issue identified

TEAC Materials

<https://www.pjm.com/-/media/committees-groups/committees/teac/20180111/20180111-teac-generation-dea>

<https://www.pjm.com/-/media/committees-groups/committees/teac/20171214/20171214-teac-generation-dea>

<https://www.pjm.com/-/media/committees-groups/committees/teac/20171214/20171214-teac-generation-dea>

<https://www.pjm.com/-/media/committees-groups/committees/teac/20170504/20170504-generation-deactivat>

<https://www.pjm.com/-/media/committees-groups/committees/teac/20170504/20170504-generation-deactivat>

<https://www.pjm.com/-/media/committees-groups/committees/teac/20140605/20140605-reliability-analysis-up>

https://www.pjm.com/-/media/committees-groups/committees/teac/20120427/20120427-reliability-analysis-up
https://www.pjm.com/-/media/committees-groups/committees/teac/20120427/20120427-reliability-analysis-up

RMR Zonal Cost Allocation

<https://www.pjm.com/-/media/planning/gen-retire/2017-2018-zonal-cost-allocation-for-retaining-bl-england-2-a>

<https://www.pjm.com/-/media/planning/gen-retire/zonal-cost-allocation-for-retaining-yorktown-1-and-2-generators>

<https://www.pjm.com/-/media/planning/gen-retire/zonal-cost-allocation-for-retaining-yorktown-1-and-2-generators>

RMR Study Results

<https://www.pjm.com/-/media/planning/gen-retire/bl-england-units-2-and-3-generator-deactivation-notification>

https://www.pjm.com/-/media/planning/gen-retire/yorktown-units-1-and-2-generator-deactivation-notification-
https://www.pjm.com/-/media/planning/gen-retire/yorktown-units-1-and-2-generator-deactivation-notification-

Related Upgrades

b2989

b2989

b2990, b2991

b2990, b2991

b2984

b2816

b2816

b2826.1, b2831.2, b2830, b2832, b2826.2, b2879.2, b2879.1, b2878, b2828, b2831.1

b2826.1, b2831.2, b2830, b2832, b2826.2, b2879.2, b2879.1, b2878, b2828, b2831.1

b2490, b2483, b2489, b2477, b2478, b2485, b2480.1, b2480.3, b2486, b2476, b2480.2, b2482, b2481, b2479, b2

b1910
b1906.4, b1905.4, b1907, b1905.3, b1905.1, b1906.1, b1909, b1905.5, b1905.9, b1912, b1905.6, b1906.2, b1910

487, b2484, b2488, b2491

, b1908, b1905.2, b1906.5, b1905.8, b1905.7, b1906.3, b1911

U.S. Coal Mogul Murray Wants to Run Power Plants Too

By **Tim Loh**

April 10, 2018, 12:23 PM EDT

Updated on April 10, 2018, 4:38 PM EDT

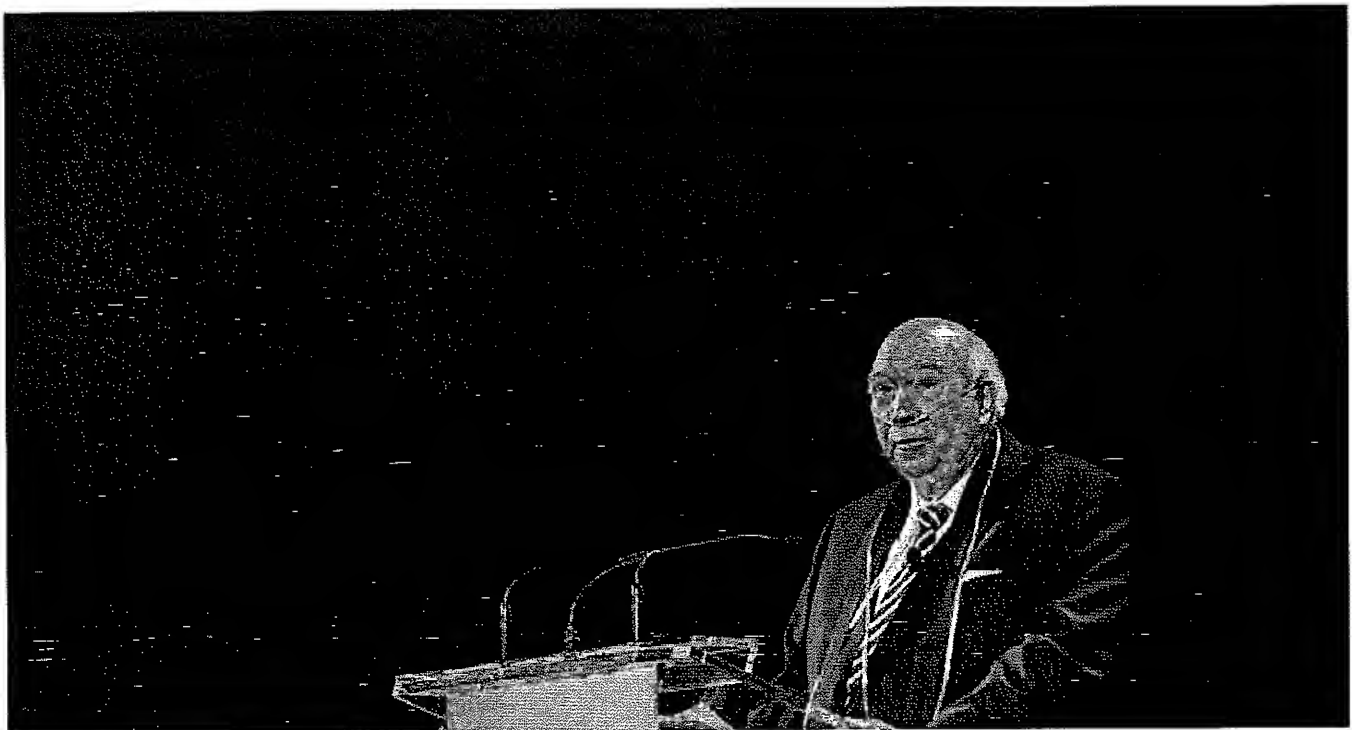
From

→ CEO Bob Murray says his company isn't at risk of bankruptcy

→ Plan would be 'culmination' of Murray's life work, he says

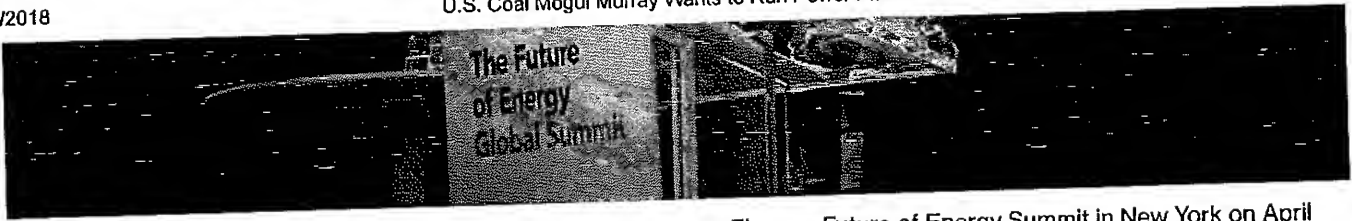
Murray Energy Corp. Chief Executive Officer Bob Murray wants to buy coal-fired power plants to shore up his mining company.

An acquisition could happen as early as this year, allowing the company to mine coal, transport it to plants and then burn it to generate power, Murray said on the sidelines of the Bloomberg New Energy Finance Future of Energy Summit in New York.



4/13/2018

U.S. Coal Mogul Murray Wants to Run Power Plants Too - Bloomberg



Murray Energy CEO Bob Murray speaks at Bloomberg New Energy Finance Future of Energy Summit in New York on April 10. Craig Warga

"It'd be the culmination of my life's work," he said. "It's a new concept. If you control the fuel supply, you can price it how you want it."

Murray has mulled such a purchase for at least 15 years but has come close only twice -- both in the past couple of years. The problem has been money, as utilities typically sell off the sites' capacity payments when they close coal fired plants. That creates cash-flow problems for a potential buyer that could fester for several years.

He has his eye on five different plants, including some of the assets of bankrupt <https://www.bloomberg.com/news/articles/2018-04-01/coal-generator-that-trump-tried-to-save-files-for-bankruptcy> FirstEnergy Solutions -- the W.H. Sammis plant in Ohio and Bruce Mansfield facility in Pennsylvania, both of which are for sale. Also attractive is FirstEnergy Corp.'s Pleasants Power Station <https://www.firstenergycorp.com/content/dam/corporate/generationmap/files/Pleasants%20Facts.pdf>, he said. The West Virginia facility is scheduled to close in early 2019.

"If you can dig coal out of the ground, you sure as heck can run a power plant," he said. "We can run power plants better than the utilities can."

FirstEnergy

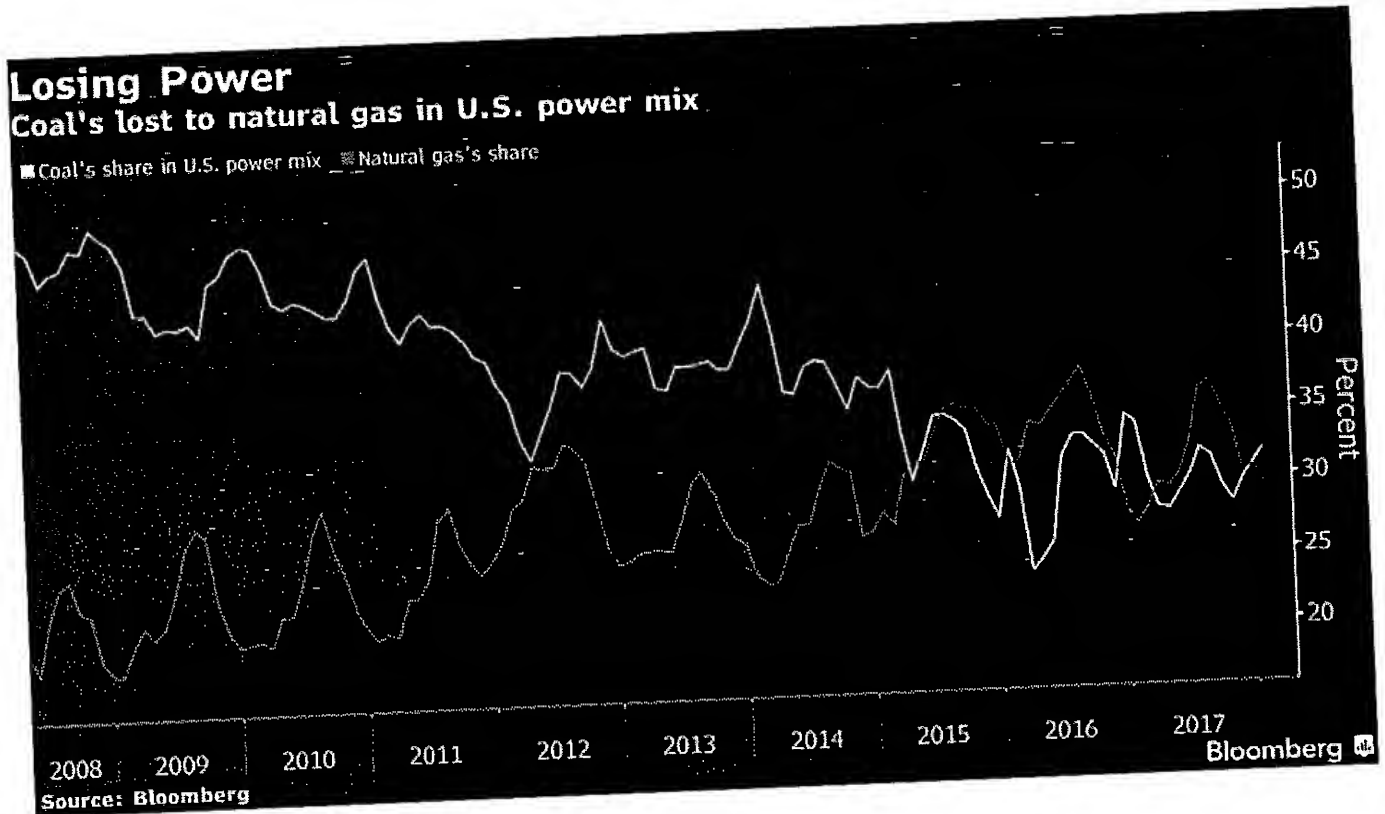
The possibility of going after FirstEnergy assets is an about face from last summer, when Murray said his company might get dragged into a restructuring by FirstEnergy Solutions. He dismissed that possibility Tuesday.

Murray Energy is in a better position this year as its overseas sales have boomed. The company plans to export 22.5 million tons of coal this year, almost a third of its overall production and the most ever. Much of the credit goes to Javelin Global Commodities, a joint venture Murray helped form in 2015 with, among others, former Goldman Sachs Group Inc. employees. The London-based trader has the potential to grow as global coal demand continues to shift toward Asian markets.

4/13/2018

U.S. Coal Mogul Murray Wants to Run Power Plants Too - Bloomberg

Murray -- who has three sons in their 40s working for the company -- said that in 10 years, Murray Energy could own as many as five coal-fired power plants and produce 110 million tons of thermal coal a year, about a sixth of his forecast for annual U.S. production then. He's not sure if U.S. thermal coal output will have fallen below 650 million tons a year by then, as that will depend on whether the leaders of America's utilities get behind coal.



But if coal slips below 25 percent of the country's power mix, "people are going to freeze in the dark," he said. It's expected to account for 29 percent of utility-scale power generation in 2018, according to government forecasts.

To keep the lights from going out, Murray expects the U.S. government to declare a power-grid emergency so impressive in scale that it would trigger payments to keep some coal and nuclear power plants online.

That controversial action -- under Section 202(c) of the Federal Power Act -- is the "only option right now," he said.

4/13/2018

U.S. Coal Mogul Murray Wants to Run Power Plants Too - Bloomberg
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Q. I don't understand the opposition between FirstEnergy and AEP. Don't they operate under the same set of rules?

by AEP Ohio on May 21, 2012

A. AEP Ohio and FirstEnergy are making the transition to a competitive market at different times.

FirstEnergy started the switch in 1999, shortly after Ohio legislators passed Senate Bill 3. This allowed a majority of Ohioans to choose who they wanted to buy generation from.

At the same time, generation rates were reduced by 5 percent and then frozen for five years.

High-cost service territories, such as First Energy, saw a significant number of customers switch to lower-cost generation providers. Low-cost service territories, such as ours, saw little to no switching.

FirstEnergy began to corporately separate its assets with a two-phase, five-year plan. FirstEnergy received nearly \$7 billion in stranded cost recovery. The company has continued to recover these costs through 2010.

During the same period, regulators repeatedly asked us to wait to move to a competitive market because our rates were stable and lower than market rates. At the request of state regulators, we contractually committed our generation to serve our customers through 2015. We did the right thing for Ohio and its electric consumers by providing below market generation rates to customers.

Last year, a surplus of power driven by the economic downturn and other forces has driven market rates below AEP Ohio's rates. Regulators have asked us to complete the transition to market.

We're asking for a three-year transition to unwind the contractual and legal obligations we entered into with the support of the Public Utilities of Ohio. This transition will ensure robust competition between strong competitors that will produce the lowest rates possible for all Ohioans while fairly compensating the company for assets currently dedicated to customers, but used by competitors for profit.

From → Fair Transition to Competition

1. tony blankenship permalink

what a load of BS, 2 years ago all the power companies got a rate increase to help pay for the cost of transporting fuel(because of the raise in gas prices). not once did u drop prices when those cost came down instead u gave the management a bigger bonus. now that the cost of transporting said fuel is back to those rate but the fuel itself has gone down you're ask for another raise. someday (and that day is getting near) the average joe will get tired of are politicians pandering to big corporations, i think we need to regulate power companies again and put all new politicians in office so at least our pay hikes will be used for all NEW bribes and just not maintance fees on the OLD bribes.

Reply

2. Kaye Presutti permalink

Well Tony, it's clear you are pissed! However dissatisfied you are with AEP, let me tell you that as a First Energy customer I'm aware that First Energy has been no less generous with their bonuses; the PUCO dealt different deals for AEP and First Energy over this transition period, now the PUCO needs to level the playing field by permitting AEP's graduated rate increase (sadly). Then customers of both companies will hopefully see legitimate competition.

Reply

3. Mark permalink

I work for HP. We took a pay cut. Same thing. AEP says they want to 'save' jobs...which translates to 'I want to make more money'. What if the workers, bosses, CEO's...etc took a pay cut? Then rate hikes would not have to happen and the AEP employees would be in the same boat as the rest of us. HP could sell computers for hundreds more than they do now...then I wouldn't have to take a pay cut...same thing with AEP.

Reply

4. Elizabeth permalink

The majority of AEP employees are also AEP customers. So taking a paycut will not solve anything, they still have to pay their electric bills just like everyone else.

Reply

5. Edward Phillips permalink

Unfortunately for AEP and other "old-line" utilities, the chickens are finally coming home to roost. I worked as a contractor with several old line east coast utilities in the 1980s and 1990s (not AEP). During all of our meetings with management, we noticed that most of the office personnel appeared to be not busy at all – many playing personal games! Also, almost every time we visited the offices, several key management executives appeared to be out playing golf! Since these companies were regulated by state commissions, we couldn't understand the low productivity levels. We later found out that the companies were guaranteed a profit by the State over and above their costs so there was very little incentive, if any, to reduce costs. It didn't help that they were being regulated by incompetent political commissions and audited by unethical accounting firms. To sum up, now that these bloated utilities face competition from companies that are better managed, they must drastically reduce costs and it will be extremely painful for them. It's a shame that the newer workers will have to suffer the layoffs, pension cut-backs, etc. The "old-line" managers who are responsible for the mess are probably long gone after cashing in their stock options and drawing out huge pensions. (reminds me of the problems faced by city, state and federal governments.)

Reply

6. Phyllis Davis permalink

To switch or not to switch? Which is the best deal??? and Why?

Reply

4/13/2018

Q. I don't understand the opposition between FirstEnergy and AEP. Don't they operate under the same set of rules? | AEP Ohio Answers

From: justin johnson
To: AskOE
Subject: Invoking Section 202(c) is bad.
Date: Sunday, April 15, 2018 3:13:26 PM

Invoking Section 202(c) to bail out failing and dirty coal plants is stupid. Why not spend money and effort working with cleaner natural gas and clean energy(wind, solar) sources. If FirstEnergy and others like it could not see the writing on the wall that natural gas and other sources of energy were the way they should be moving then they need to die and let forward looking companies take over the market.

From: Justin Klinger
To: AskOE
Subject: Section 202c
Date: Sunday, April 15, 2018 4:16:13 PM

Please do not use a fake state of emergency to interfere in the running of the electrical power generation industry. Free market economics and existing regulations are more than adequate to ensure reliable electricity. Also, the mining, transportation, and burning of coal is responsible for far more health issues and deaths than the imagined power outage would. So if there really were an emergency, it would be that we're already burning too much coal. Please act like a Republican and keep big government out of business.

Assuming you'll continue to ignore the interests of taxpayers,
Justin Klinger

From: Juan Lang
To: AskOE
Subject: Do not use section 202.c to keep uneconomical plants afloat
Date: Sunday, April 15, 2018 7:29:41 PM

Secretary Perry appears to be building a case that certain plants are critical to national security in general, in order to be able to apply section 202.c to provide assistance to keep plants afloat. This is the wrong approach to take. The energy industry has to be able to function without major government interference. If an individual operator cannot, it can use existing mechanisms like bankruptcy protection to cope. If this is not enough to keep the grid as a whole healthy, this is a matter for the congress to attend to. Stretching an existing statute beyond all recognition, suggesting that we are eternally at war or in a state of disaster, to help an individual operator is a mockery of the statute's authors and an abuse of the secretary's power.

From: Leif Laudamus
To: [AskOE](#)
Subject: 202c
Date: Sunday, April 15, 2018 1:44:07 PM

In regard to secretary Perry's invoking of 202c, in the opinion of this voter, this runs contrary to what our national long-term clean energy goals should be. There is no such thing as "clean coal." Anything other than the phasing out of coal-fired power plants runs counter to America's best interests. Sincerely, Leif Laudamus

From: christina lemieux
To: AskOE
Subject: Corporate coal bailouts
Date: Sunday, April 15, 2018 4:37:57 PM

I find it reprehensible to think that my tax dollars will go to bailout of a failing industry. What Happened to free market Enterprise? They failed after earning billions from America. Now they want Americans to pay to bail them out s they can profit of us. Communist do that because that can't admit that they were wrong. No bailout.

From: Rob L'Heureux
To: AskOE
Subject: Federal Power Action section 202(c)
Date: Sunday, April 15, 2018 3:33:50 PM

Hello,

I am writing as a private US citizen regarding the potential for invoking section 202(c) with respect to FirstEnergy. This power should not be invoked for this case. There is no energy crisis that demands immediate intervention. We are not at war, and the grid is not in any immediate danger. This is a failing business, which should not be rewarded with federal protection at taxpayer expense. They cannot provide energy reliably or cheaply enough on their own, and the market has valued them appropriately. The federal government should encourage the market to better address infrastructure challenges like these, not reward failing investments. By allowing this company to fail, it will create an opportunity for entrepreneurs and investors with more affordable and sustainable business practices.

Even if there were an immediate true crisis that demanded more electricity from the US, scaling up coal production to meet it would have hardly any lead time. Put your faith in American ingenuity, free markets, and opportunity – not fear, inefficient technology, and failing investments.

Sincerely,

Rob L'Heureux

From: ben lichtin
To: [AskOE](#)
Subject: the latest effort by the sec. of energy to burn coal
Date: Sunday, April 15, 2018 3:19:29 PM

I am unalterably opposed to the latest crying wolf refrain by the Energy Secretary to prop up

domestic old technology coal plants. His arguments are as transparently weak as the damage done to the environment

is great if his latest stunt is approved. On the DOE website are the many examples which

led to a 202c emergency order. NONE of these are remotely comparable to the situation

of First Energy's mothballing of certain of its energy plants due to factors that have

everything to do with competition in the domestic energy marketplace, that is, its bankruptcy, and nothing to do with

resilience of the grid. There has been no concern expressed by anyone in the regions served by these plants that energy supplies

will suffer as a result of these shutdowns. Have any of the affected state utility regulators expressed concern? I

am not aware of this. Nor did Perry cite convincing examples of such in his recent testimony.

So how this can possibly be characterized as a condition requiring imminent emergency invocation of 202c? Are we

doing government by hype and hysteria?

The publicity stunt that this effort represents is not much more than an effort to circumvent the effect upon market supply

forces unleashed by deregulation in the domestic energy supply market by using government authority

to choose winners and losers. It is bad enough this comes from a republican. It is even worse that

his effort is focused upon a genuine loser in the game. It is obscene that his effort is directed at getting more

carbon based energy into the energy use mix. It is exactly the opposite of what we should be doing, and with

government support.

You can't justify approving this emergency invocation of 202c if you believe in basing your

decisions upon careful consideration of all available evidence, as well as what commonly understood

uses of the term "emergency" should mean. Getting caught up in and being swayed by the heated, ridiculously exaggerated

rhetoric of Sec. Perry does no one, especially the domestic energy customer, ANY good at all. Indeed, the inevitable

consequence of approving this request will be higher prices for the end user....something he failed to point out

with nearly the same level of intensity. Curious fact that. Indeed, that dramatic choice he did articulate, between

keeping warm or staying nourished, will be precisely the consequence of allowing these plants to operate with

the higher prices required to keep them afloat.

Are we all supposed to sit back and allow such evidently self contradictory and hysterical rhetoric to dictate

policy for us? I would hope not. But times are very strange these days, and it is hard to say

whether we are still functioning as an enlightened state that makes policy for the greater good

by combining sound reasoning with a rigorous examination of all relevant evidence.

Ben Lichtin

From: Matthew McHarg
To: AskOE
Subject: Do not enact 202c
Date: Sunday, April 15, 2018 11:40:46 AM

No reason other than cronyism.

Respectfully Yours

Matthew G McHarg

Sent from my iPad

From: thomas mcrae
To: AskOE
Date: Sunday, April 15, 2018 11:22:41 AM

Dear Sirs:

I am writing to ask that you NOT invoke emergency powers that are neither necessary nor likely to be of a defined and temporary nature.

It is clear to me that you are playing politics in order to satisfy your political base and, more demonstrably, your need to placate an irrational and ignorant president.

I ask also that you consider the following likely consequences if you take this action:

- You will be propping up ever-more costly technologies to the detriment of cleaner and cheaper energy sources
- You will CAUSE the premature deaths of citizens to the extent that coal mines and coal fired plants remain in operation
- You circumvent the rule of law and that capriciousness chills the very investments that will provide the resiliency you claim to be seeking
- And, finally, you will not be "draining the swamp", but instead expanding it to the benefit of your donors and the rich and powerful who have access to the levers of government.

I am hopeful that my comments and those of my fellow citizens will be considered in the decision making process.

Sincerely,
Thomas McRae

From: Wesley Mokry
To: [AskOE](#)
Subject: Use of Section 202(c) for non emergency
Date: Sunday, April 15, 2018 11:35:49 AM

Perry's corruption doesn't seem to end. A business failing because of poor decisions isn't a good reason for the government to bail it out. The only emergency situation is the poor running of government under the current president. The trump* administration is continuing to drain the swamp by making it a cesspool.

*Lost the popular election by 2.8 MILLION votes - SAD.

From: Christopher O'Leary
To: AskOE
Subject: Nuclear power support
Date: Sunday, April 15, 2018 8:59:15 PM

To whom it may concern

I am a small business owner in the state of Pennsylvania that uses a significant amount of electric power that is very concerned about the prospect of the nuclear plant shutting down in Shippingport PA.

I understand that natural gas is very inexpensive today but it seems foolish to allow such an incredible asset of the nuclear plant be shutdown and thus wasted forever. If natural gas prices are to rise in the future which could easily happen due to any number of unknowns like issues drilling, well contamination, earthquakes etc we will be in a position where we really regret having lost this capacity.

I am by no means making a plea on an environmental basis or any one specific issue. I believe that we as a community have invested a tremendous amount in this infrastructure and it seems to be very shortsighted to let it go on the basis of cheap natural gas alone. We risk grid resiliency and price stability in the future where it appears that a modest subsidy not too dissimilar to what we do for solar and wind would go a long way toward energy security and stability.

Christopher O'Leary
VP Operations
Kenson Plastics

From: Alfred Purzycki
To: AskOE
Subject: Power Action section 202(c) - D.O.E. Comment
Date: Sunday, April 15, 2018 7:35:18 PM

This is in regard to the Power Action section 202(c) proposed implementation.

This is the second time the DOE has attempted to subsidize Coal and Nuclear power plants with little justifications, the last time being at the request of a failing First Energy.

Section 202(c) was designed for use in **WARTIME** and **NATURAL DISASTER** to maintain power output.

There is no **WAR** that is impacting the American People at this time.

There is no **NATURAL DISASTER** that is still impacting the American people at this time (except in Puerto Rico, that this administration has ignored.)

Currently the DOE Secretary of Energy declares that grid resilience will be impacted without subsidies to the Coal and Nuclear industry but studies and Major grid operators have already contended that **grid resilience can be maintained and even improved without keeping uneconomic COAL and NUCLEAR plants online**. Today there are about 100 mandatory, enforceable standards, to ensure grid reliability in the United States.

Money proposed for the subsidy of nuclear and coal plants would be better spent for:

- Wind Energy (and associated research)
- Solar energy (and associated research)
- Utility Scale Battery Storage
- Hydro-electric and geothermal
- Natural Gas peaking plants

Wind and Solar will decrease our dependence on foreign sources for petrochemicals, improving our country's security and energy independence. Look at Texas's success in deploying wind turbines; although I think the D.O.E. Secretary has forgotten about Texas.

Utility scale Battery Storage will dramatically improve grid resilience no matter what source of energy involved (as proven successfully in Australia).

These top three can be done for less, in the long run, than attempting to maintain existing, aging and unprofitable energy solutions.

In closing, America needs to look forward, not back, for our energy needs. I personally want something better for myself, my children, my grandchildren and great grandchildren. I own an electric car, I have solar on my roof. I'm trying to do my part to improve our country's energy independence and security. I think this kakistocratical administration's Department of Energy should do their job! Act in the interest of the AMERICAN PEOPLE and not pander to archaic energy industry lobbyists and their feeble attempt to maintain preeminance in a changing world.

Retired Wireless Telecommunications Executive

Alfred Z. Purzycki
(b) (6)

From: Raelynn OLeary
To: [AskOE](#)
Subject: Nuclear Energy Support
Date: Sunday, April 15, 2018 9:47:57 PM

To Whom it May Concern,

I'm writing in support of any measures necessary to maintain operations at the Beaver Valley Nuclear plant.

The nuclear plant, as a source of reliable, renewable, carbon-free energy is imperative to the security of our energy grid and the economic prosperity of the region and the small town where I live. Closing the plant will force a dependence on natural gas. What happens when gas prices shift and it's no longer as cheap or as readily available?

It's my hope that our policymakers will take a long-term view and do whatever it takes to leverage the infrastructure we already have in place as a way to maintain our energy security.

Thank You,
Raelynn O'Leary
Beaver, PA

Sent from my iPhone

From: Nathan Schubert
To: AskOE
Subject: DOE's Use of Federal Power Act Emergency Authority
Date: Sunday, April 15, 2018 10:28:59 AM

It is beyond ridiculous that federal money is even being considered to bailout failing energy companies that for years have resisted moving energy production to cheaper, more sustainable forms. Corporate mismanagement and incompetence is NOT a federal emergency.

Nathan Schubert,
Pennsylvania, 17062.

From: specific instance
To: AskOE
Subject: 202c For FirstEnergy
Date: Sunday, April 15, 2018 2:57:09 PM

I'm opposed to using the provisions of 202(c) to rescue FirstEnergy from bankruptcy. While grid stability is a serious concern, maintaining coal-fired power plants will not ensure grid stability, as coal is subject to the same supply fluctuations as other fossil fuels. Grid stability would be better insured by focusing on renewable sources of generation and advancing grid storage technology. Maintaining a system leftover from the mid-20th century will only delay the development of a truly stable and secure energy grid.

--

-Alex

From: Brian Wirt
To: AskOE
Subject: Federal Power Action section 202(c)
Date: Sunday, April 15, 2018 5:00:36 PM

This is ridiculous. There is no emergency. This is nothing more than Trump administration stooges trying to prop up their polluting coal buddies.

Disgraceful. Perry should be fired.

Brian Wirt
Seattle, WA

From: Joshua Zelinsky
To: AskOE
Subject: Use of Section 202(c)
Date: Sunday, April 15, 2018 10:54:00 AM

To Whom It May Concern,

I am writing as a concerned citizen strongly opposed to the use of section 202(c) to functionally bail out and keep coal plants operating. If the economics do not support their existence then they should close; let the market solve for what plants are or are not productive. There's no substantial evidence that fewer coal plants will increase grid instability. It isn't even clear that running coal plants at all provides a net economic benefit as one can see from Muller, Mendelsohn, and Nordhaus. 2011. "Environmental Accounting for Pollution in the United States Economy." American Economic Review, 101 (5): 1649-75. Moreover, the use of authorization intended for war-time use stretches massively the idea of what constitutes a national security problem.

Sincerely,

Josh Zelinsky

From: Frank Callaham
To: AskOE
Subject: FPA section 202(c) should NOT be used now...
Date: Monday, April 16, 2018 12:09:41 AM

Coal and Nuclear power plants should either stand on their own or shutter. Power needs will be fulfilled based on supply and demand — we have an abundance of natural gas.

Stop politicizing the DOE to give a **handout** to coal and focus on the import work of the DOE.

Frank Callaham
Austin, TX

From: Rick Cermak
To: AskOE
Subject: Federal Power Action section 202(c)
Date: Monday, April 16, 2018 12:42:46 AM

The Energy Secretary spent most of his first year on the job laying the groundwork to propose a rule that would help coal and nuclear power plants stay afloat despite competition from low-cost natural gas. This proposal was solely for the purpose of fulfilling a Trump campaign promise to reinvigorate the coal industry and was rightly struck down. Now the Energy Secretary suggest that a state of emergency exists in energy that only coal subsidies can solve. Please reject this nonsense. There are many real emergencies that the government should address.

Gratefully,
Rick Cermak
(b) (6)

From: Doug Diamond
To: AskOE
Subject: Federal Power Action section 202(c)
Date: Monday, April 16, 2018 4:30:21 PM

To whom it may concern -

I am writing to document my opposition to the use of section 202(c) outside of a narrowly defined emergency situation as constituted by a natural disaster, extreme weather incident, or unexpected terrorist incident.

While our grid is definitely in need of upgrade, and ensuring that there is appropriate baseline power generation to support grid stability is vital, this is not the right tool to use. Failure of political will to effect real change to our power structure does not constitute an Emergency.

What has been proposed recently, namely to use this section to distort the market forces that have rightly devalued coal and fuel oil to the point where they are not viable production sources, is backward thinking, and will only harm our ability to build a stable, future-proof grid. It is nothing more than a bailout for companies that do not deserve our tax dollars, because they failed to understand the way energy markets were moving.

It is eminently possible to have a fully stable grid using renewables, natural gas, and nuclear, especially taking advantage of industrial-scale battery or capacitor storage. Both research and real-world practice prove this.

So no, I would not support use of section 202(c) for any purpose other than a narrowly defined, unpredictable disaster event.

Thank you,

Douglas Diamond
(b) (6)

From: bngoetz@wcnet.org
To: AskOE
Subject: Section 202(c)
Date: Monday, April 16, 2018 12:51:50 PM
Attachments: [FFRC.pdf](#)
[Secretary Perry.pdf](#)

Honorable Rick Perry, Secretary of Energy,

My name is Brad Goetz. I am the Business Manager of IBEW Local 1413. Until there is a level playing field in the market we will continue to support nuclear energy and baseload generation. Local 1413 urges you to enact section 202(c) of the Federal Power Act on February 15, 2018. Congresswoman Kaptur and three other members wrote a letter to President Trump and yourself about the importance of baseload generation and nuclear power. We urge you not to delay and to compensate these nuclear and coal fired units appropriately for their full costs of operation by enacting section 202(c). Thank you for your time.

Thank you,
Brad Goetz



October 13, 2017

Federal Energy Regulatory Commission
Secretary of the Commission
888 First Street, NE
Washington, DC 20426

Re: Grid Resiliency Pricing Rule
FERC Docket No. RM18-1-000

**COMMENTS OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL
WORKERS, LOCAL UNION 1413 IN SUPPORT OF THE PROPOSED RESILIENCY
RULE**

On September 28, 2017, the Department of Energy ("DOE") issued the "Grid Resiliency Pricing Rule" (the "Proposal") directing the Federal Energy Regulatory Commission ("FERC") to adopt a rule requiring operators of organized markets to "ensure that certain reliability and resiliency attributes of electric generation sources are fully valued." Such a rule, as contemplated by the regulatory language of the Proposal, will ensure that existing nuclear and coal-fired electric generating stations in Ohio will be compensated appropriately and fully for their costs of operation and will avoid premature retirement. Adoption of that rule will thus sustain the long-term viability of critical power plants, preserve and create jobs, maintain electric reliability, and provide substantial economic benefits to the many hard-working Americans living throughout the region.

IBEW Local 1413 strongly supports the Proposal and shares the Secretary's urgency that FERC act promptly to direct operators of organized markets to issue the requested rule. FERC has the ability to act, and must act, without undue delay to avoid premature closure of crucial power plants and our members' loss of critical economic and reliability benefits. FERC has thoroughly examined how electric markets function and how those markets affect the continued operation of crucial power plants needed for reliability for some time. FERC has the requisite basis to act now. There is no time for delay. In addition to acting promptly, FERC should also direct organized

International Brotherhood of Electrical Workers
Local Union No. 1413 • P.O. Box 122 • Oak Harbor, Ohio 43449

market operators to issue a comprehensive and enduring set of rules, based on the regulatory language of the Proposal, for the proper compensation of critical power plants. Protracted proceedings undertaken by organized market operators that fail to develop fair, compensatory and transparent rules will only engender market uncertainty and delay in providing sufficient compensation to these facilities, thereby jeopardizing the operation of the very plants that the DOE seeks to maintain in operation.

I. COMMUNICATIONS

All communications, correspondence, and documents related to this proceeding should be directed to the following person:

Brad Goetz
President & Business Mgr.
IBEW Local 1413
PO Box 122, Oak Harbor, Ohio 43449
(b) (6)
bngoetz@wcnet.org

II. DESCRIPTION OF IBEW LOCAL 1413

IBEW Local 1413 is a progressive labor organization that represents security professionals in the Generation industry.

III. DESCRIPTION OF IBEW LOCAL 1413'S INTEREST IN PROCEEDING

IBEW Local 1413 is a party to a collective bargaining agreement with the owners of baseload coal and nuclear power plants located in Ohio. As a result, the wages, terms and conditions of employment of our members may be directly affected by the actions taken by the FERC and operators of organized markets in this proceeding. Thus, IBEW Local 1413 members have a direct and substantial interest in this proceeding. As well, the unique perspective of IBEW Local 1413 and its members will only serve to enhance the record in this proceeding.

IV. COMMENTS

The communities where struggling baseload coal and nuclear power plants are located are dependent on the jobs and economic development opportunities the power plants provide. The recent decline in Ohio's electric power industry, for example, has led to reductions in operations and capital improvement expenditures at numerous power production and manufacturing facilities across Ohio. This has led to extreme hardship for the thousands of union workers employed in this industry as well as their families.

It is imperative that baseload coal and nuclear plants continue to operate in light of these dire circumstances. Baseload coal and nuclear plants in Ohio provide thousands of MWs of reliable power, and provide union jobs and economic opportunities to IBEW Local 1413 members. The Davis Besse and Bayshore generation stations directly employ approximately 144 IBEW Local 1413 members, and the maintenance and capital improvement work on these plants supports the local economy by creating thousands of well-paying union jobs for contractors. In addition, these plants contribute millions each year in state and local tax revenues that support local schools, police and fire departments and other vital public services. The loss of jobs, tax revenue, and the ripple effect of such losses throughout the local economy, will have a severely detrimental impact on the region.

The issuance of a rule preserving the continued operation of resilient baseload coal and nuclear power plants will maintain a reliable supply of electricity for the region's energy-intensive economy in two ways. First, the preservation of certain plants will avoid the need to replace lost generation with imports and the associated construction of infrastructure to facilitate such importation. Preserving baseload coal and nuclear power plants will keep these needed, reliable

facilities running close to home without the need to depend on distant resources, particularly during catastrophic events like severe storms, to fulfill our region's dynamic need for reliable electricity.

Second, premature plant closures will deplete the stable of highly skilled (and specifically trained and experienced) employees, many of whom have lived in the region for several years and who take great pride in their work. With a depletion of this skilled and experienced group of workers, and the possible replacement of these workers with more distant and perhaps less-skilled individuals, we will see a direct and adverse impact on our ability to maintain the generation facilities that continue to operate and, as important, our ability to respond promptly to severe contingencies affecting the operation of these remaining plants in operation. In short, allowing baseload coal and nuclear power plants to close prematurely will have an adverse impact on the reliability of the region's electricity supply and on the reliable operation of the regional electricity system.

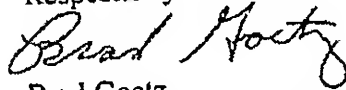
Rates for the sale of electricity that are inadequate to sustain the operation of base load generation facilities that provide reliability and resiliency support cannot be considered to be just and reasonable. Because of the loss of jobs, the significant reduction in payments to local governments, and the decline in electricity resource and grid reliability that would result from deactivation of the nuclear and coal-fired generating facilities in Ohio, it is essential that the FERC adopt a rule, such as that proposed by DOE, which will ensure that such generating facilities are fully compensated for their costs and will remain in operation.

In order to mitigate the risk that such generating units may be deactivated prematurely, IBEW Local 1413 strongly urges FERC to adopt the rule proposed by the DOE as promptly and comprehensively as possible. FERC has a sufficient record to act that will be further bolstered by the comments considered in this proceeding. FERC has thoroughly considered the impact of

electric markets on the sustained operation of at-risk power plants and, as noted by the Secretary of the DOE, the time to act is now given the severe impacts to system reliability and resilience, and national security, attendant to the premature closure of crucial power plants. Any protracted delay in creating fully compensatory market rules will only exacerbate the problem of pre-mature closures.

In acting promptly, FERC should also direct the organized market operators to issue a rule that is not only compensatory (and based on the regulatory language of the Proposal) but comprehensive and enduring. The rules to be issued by operators of organized markets should be fair and transparent, and should ensure that critical power plants can continue to operate for the long-term and without the prospect of repeated re-examination and adjustment to their market compensation. The uncertainty that less than comprehensive and enduring market rules will engender will defeat the very purpose of preserving the extended operation of these much-needed power plants.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Brad Goetz".

Brad Goetz
President & Business Manager
IBEW Local 1413



Dear Secretary Perry,

Unions, labor and power plant workers across the country applaud the Department of Energy's study examining electricity markets, the value of baseload power and the long-term security and resiliency of the electric grid. Baseload coal and nuclear power plants employ more than 154,000 workers, produce major infrastructure projects that put Americans to work, and support a resilient electric grid.

Baseload power plants have long been the "work horses" of the electric system, providing energy to customers 24 hours a day, 365 days a year. With significant on-site fuel reserves, they provide the resiliency required to keep electricity flowing under all circumstances since their operation is not subject to interruption by extreme events such as weather or attacks on infrastructure that disrupt fuel delivery to other generation resources. Recently, EPA Administrator Pruitt noted as much when he talked about the consequences of an attack on key infrastructure. Our nation's security is dependent on maintaining these plants to support a resilient supply of electricity.

However, numerous baseload power plants have permanently shut down in recent years, and many more are expected to close prematurely in the very near future. Once they are gone, they are gone for good. Baseload generation is under serious threat from market-distorting subsidies and mandates, regulations that target these resources, low natural gas prices and markets that don't value resiliency. We are at a crisis point. Further decline in the number of plants will not only impact the grid and national security, it will cost valuable jobs and discourage industrial development opportunities nationwide. This is an outcome America simply can't afford.

Our baseload power plants and the dedicated, skilled workers who operate them are the lifeblood of their communities. They deliver a strong tax base and support between three and eight times more high-paying jobs than do other forms of electricity generation. We depend on these plants to create a robust workforce, and the country depends on them to support a healthy economy and electricity supply.

Unless action is taken, the long-term viability of baseload power plants along with the jobs and substantial economic opportunities they bring is at risk. And, our national security could be compromised if we don't ensure a resilient grid. We encourage the Administration to take prompt and meaningful action to protect baseload power plants and America's energy future.

Sincerely,

Brad Harty
Pres./B.A. IBEW Local 1413

International Brotherhood of Electrical Workers

Local Union No. 1413 • P.O. Box 122 • Oak Harbor, Ohio 43449



From: Welsh, Michael D.
To: AskOE
Subject: Energy Supply Emergency
Date: Monday, April 16, 2018 10:44:40 AM
Attachments: IBEW Third district.pdf
May 2017 IBEW District 3.pdf

Rick Perry, Secretary
U. S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Dear Secretary Perry,

As in previous comments and due to recent weather events, the need for a resilient baseload generation is even more apparent today. It is essential that coal-fired and nuclear baseload generation be kept in the energy mix and be compensated appropriately to make sure they are available when called upon to provide energy to the grid. If coal-fired and nuclear units continue to close prematurely, the reliability of the United States energy grid could be in serious jeopardy. We ask that you issue an emergency order under the Federal Power Act Section 202(c) until the base-load generation issue is resolved. Thank you in advance for your attention to this important matter.

Sincerely,

Mike Welsh

International Vice President
IBEW Third District
412-269-4963



Lonnie R. Stephenson, International President
Kenneth W. Cooper, International Secretary-Treasurer

Delaware

The members of the IBEW have been made first hand witnesses to some near catastrophic events due to natural disasters that were averted by a well-balanced energy portfolio; from the Polar Vortex of 2014 to the more recent hurricane Harvey that struck the Gulf States. During each of these disasters, our grid could maintain reliability thanks in

International Brotherhood of Electrical Workers
Third District

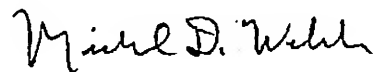
Federal Energy Regulatory Commission
Page 2

part to on-site, readily available fuel sources that were housed at several generation plants throughout the affected areas. We feel that this is a unique asset that our country's coal and nuclear generation fleet brings to the table. Unfortunately, some of the gas units were unable to stay online because of the interruption in fuel supply.

Going forward, we feel these efforts will ensure multiple fuel sources, as well as protect the resiliency of the grid.

We understand that the proposed timeline may seem daunting. However, we would like to extend our sincerest gratitude for your time and consideration of our views.

Sincerely,



Michael D. Welsh
International Vice President

MDW:jm



International Brotherhood of Electrical Workers



Donald C. Siegel, International Vice President
500 CHERRINGTON PARKWAY, SUITE 325
CORAOPOLIS, PA 15108
(412) 269-4963 • Fax (412) 269-4964

Lonnie R. Stephenson, International President
Salvatore J. Chilla, International Secretary-Treasurer

New York

New Jersey

Pennsylvania

Delaware

May 16, 2017

Rick Perry, Secretary
U. S. Department of Energy
1000 Independence Avenue SW
Washington DC 20585

Dear Secretary Perry:

I write to you on behalf of the Third District of the International Brotherhood of Electrical Workers (IBEW.) The IBEW Third District encompasses the states of Delaware, New Jersey, New York and Pennsylvania. According to a recent DOE/EIO study, "Pennsylvania is one of the top three electricity-generating states in the nation, along with Texas and Florida. Electricity generation regularly exceeds in-state consumption, making the state an important electricity supplier to the Mid-Atlantic region. Pennsylvania ranks second in the nation, after Illinois, in nuclear generating capacity, and nuclear power is the state's largest source of generation. The state's five nuclear stations have provided more than one-third of net electricity generation in recent years."

Unions, labor and power plant workers across the country applaud the Department of Energy's study examining electricity markets, the value of baseload power and the long-term security and resiliency of the electric grid. Baseload coal and nuclear power plants employ more than 154,000 workers, produce major infrastructure projects that put Americans to work, and support a resilient electric grid. These baseload plants are extremely important to our members and their communities.

Baseload power plants have long been the "work horses" of the electric system, providing energy to customers 24 hours a day, 365 days a year. With significant on-site fuel reserves, they provide the resiliency required to keep electricity flowing under all circumstances since their operation is not subject to interruption by extreme events such as weather or attacks on infrastructure that disrupt fuel delivery to other generation resources. Recently, EPA Administrator Pruitt noted as much when he talked about the consequences of an attack on key infrastructure. Our nation's security is dependent on maintaining these plants to support a resilient supply of electricity.

However, numerous baseload power plants have permanently shut down in recent years and many more are expected to close prematurely in the very near future. Once they are gone, they are gone for good. Baseload generation is under serious threat from market-distorting subsidies and mandates, regulations that target these resources, low natural gas prices and markets that don't value resiliency. We are at a crisis point. Further decline in the number of plants will not only impact the grid and national security, it will also cost valuable jobs and discourage industrial development opportunities nationwide. This is an outcome America simply can't afford.

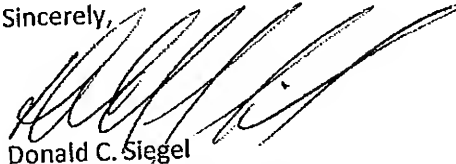
International Brotherhood of Electrical Workers
Third District

Secretary Rick Perry
May 16, 2017
Page 2

Our baseload power plants and the dedicated, skilled workers who operate them are the lifeblood of their communities. They deliver a strong tax base and support between three and eight times more high-paying jobs than do other forms of electricity generation. We depend on these plants to create a robust workforce, and the country depends on them to support a healthy economy and electricity supply.

Unless action is taken, the long-term viability of baseload power plants, along with the jobs and substantial economic opportunities they bring, is at risk. And, our national security could be compromised if we do not ensure a resilient grid. We encourage the Administration to take prompt and meaningful action to protect baseload power plants and America's energy future.

Sincerely,



Donald C. Siegel
International Vice President

DCS:jm

cc: PA US Senators
PA House Members



April 16, 2018

The Honorable James Richard Perry
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

*Re: FirstEnergy Solutions' Request for Emergency Relief under Section 202(c) of the
Federal Power Act*

Secretary Perry:

The Natural Gas Supply Association respectfully submits this response to the above-referenced request filed on March 29, 2018 by FirstEnergy Solutions and its affiliates (collectively, FirstEnergy) with the U.S. Department of Energy (Department). For the reasons below, we believe there is no basis to grant this request, nor is there a basis for any action at this time that would interfere with operation of the PJM market or broadly seek to support coal or nuclear power plants. PJM has already written a response to the request stating that, "there is no immediate threat to system reliability."¹ It further stated that it has a detailed and clear process (via the PJM Tariff) to assess and address any concerns posed by the announced plant closures. Markets for electric power are serving consumers well. The Department should not use its authority to interfere in those markets, which would create inefficiencies and raise costs for consumers.

I. Comments of the Natural Gas Supply Association

FirstEnergy requests that the Department use its authority under Section 202(c) of the Federal Power Act to dictate that the owners of merchant coal and nuclear generators in PJM receive a guaranteed return on equity for four years. FirstEnergy requests a remedy that is beyond the

¹ See PJM Interconnection, *Response to FirstEnergy Solutions' Request for Emergency Relief under Section 202 of the Federal Power Act* (March 30, 2018) available at <http://www.pjm.com/-/media/documents/other-fed-state/20180330-response-to-fe-solutions-request-for-emergency-relief.ashx>

Department's authority to provide and that is based on a purported emergency lacking any basis in fact. For these reasons, the Department must deny the request.

Section 202(c) gives the Department authority to order generators to run during emergencies. Put differently, Section 202(c) allows the Department to make the act of generating electricity compulsory when it would otherwise be voluntary or, in some cases, prohibited by environmental laws. FirstEnergy would like to transform Section 202(c) from a narrow "must-run" authority into something it is not: a broad ratemaking authority akin to Sections 205 and 206 of the Federal Power Act. This is evident throughout their request. FirstEnergy does not ask that the Department order any generator to run² – an omission that cannot be squared with the statutory text. Nor does it attempt to determine how many coal and nuclear power plants must be required to run in order to alleviate the "emergency" it asks the Department to imagine. Tellingly, the only meaningful limitation FirstEnergy would impose on the scope of its requested order relates to the type of *compensation* these generators receive, and not whether each generator is necessary to address the supposed emergency.³

Instead of requesting a must-run order tailored to emergency circumstances, as applicants under Section 202(c) normally do, FirstEnergy requests rate relief. FirstEnergy asks the Department to increase the wholesale rates paid to a favored class of generators, and effectively unwind the wholesale market that the PJM stakeholders and the Federal Energy Regulatory Commission (FERC) have worked decades to develop. But Section 202(c) does not give the Department authority to supersede the FERC's authority over wholesale rates conferred in Sections 205 and 206 of the Federal Power Act. Of course, Section 202(c) ensures that generators receive "just and reasonable" terms for their actions carrying out the order. But compensation is not the purpose of Section 202(c). Rather, the reference to just and reasonable terms is only a necessary accommodation for the fact that the generator has been required to run and has therefore incurred costs. Moreover, Section 202(c) was enacted at a time when the Federal Power Commission had authority over the Federal Power Act as a whole, including Sections 205 and 206. Thus, reading Section 202(c) to provide separate ratemaking authority makes little sense within the broader context of the Federal Power Act.

For these reasons, the Department's regulations foreclose FirstEnergy's attempt to use Section 202(c) as an end run around FERC's wholesale rate authority. When it promulgated its

² FirstEnergy requests that the Department order certain generators to "enter into contracts and all necessary arrangements with PJM, on a plant-by-plant basis, to generate, deliver, interchange, and transmit electric energy, capacity, and ancillary services as needed to maintain the stability of the electric grid," and also to order "PJM to promptly compensate at-risk merchant nuclear and coal-fired power plants for the full benefits they provide to energy markets." FirstEnergy Request at 1. The first of these proposed directives would merely require that generators enter into contracts with PJM and does not specify that generation would be compulsory or that unit retirement would be prohibited or altered from the current generator deactivation rules contained in Part V of the PJM Tariff. The second of these directives solely addresses the compensation received by generators subject to the proposed order.

³ See FirstEnergy Request at 31 (excluding from the scope of its request generators that "recover any of their capital or operating costs through rates regulated by a duly authorized state regulatory authority, municipal government, or energy cooperative").

regulations implementing Section 202(c) after enactment of the Department of Energy Organization Act, the Department rightly left rate issues to FERC, stating that “this responsibility is vested in the Federal Energy Regulatory Commission (FERC) and must be addressed in its regulations.”⁴ Thus, in Section 205.376 of its regulations, the Department encouraged the use of existing rate schedules for service under 202(c) orders and made clear that FERC – not the Department – has responsibility for resolving “rate issues.”⁵ Nevertheless, notwithstanding this clear text and without explanation, FirstEnergy requests that the Department – not FERC – “step in and determine the just and reasonable compensation” for a broad swath of generators over a period lasting at least four years.⁶ Neither the Federal Power Act nor the Department’s regulations would authorize the Department to do so.

Not only has FirstEnergy failed to request relief that the Department has authority to provide, it has also failed to identify an emergency that may serve as a predicate for action under Section 202(c). Consistent with common usage of the word “emergency,” Section 202(c) and the Department’s regulatory definition describe emergency events variously as “sudden,” “unexpected,” and “imminent.”⁷ The retirements FirstEnergy wants to prevent are neither sudden, nor unexpected, nor imminent. Most obviously, the three nuclear plants FirstEnergy has proposed to retire would not be deactivated until 2021, and even then, only if PJM determines that they can retire consistent with system reliability. The same is true for all the merchant generators on FirstEnergy’s list, the overwhelming majority of which have not indicated any intention to retire in the near term.

Nor has FirstEnergy established that the retirement of certain uneconomic generators would create an emergency. Although the Department has authority to act in emergencies, it does not have authority over long-term reliability planning on the bulk electric system. That responsibility lies with FERC, its delegate the North American Electric Reliability Corporation, and the system operators themselves, in this case PJM. Each of these organizations has concluded emphatically that the PJM system is reliable. PJM currently has a reserve margin that well exceeds its 2018 target of 16.1%.⁸ Moreover, with respect to the recent Bomb Cyclone on which FirstEnergy’s request relies, PJM has stated that “[e]ven during peak demand, PJM had

⁴ See Economic Regulatory Administration, *Energy, Emergency Interconnection of Electric Facilities and the Transfer of Electricity to Alleviate an Emergency Shortage of Electric Power*, 46 Fed. Reg. 39,984, 39,985 (Aug. 6, 1981).

⁵ 10 C.F.R. § 205.376.

⁶ FirstEnergy Request at 32.

⁷ See 16 U.S.C. § 824a(c); 10 C.F.R. § 205.371.

⁸ U.S. Sen. Comm. on Energy and Nat. Res., *The Performance of the Electric Power System in the Northeast and Mid-Atlantic During the Recent Winter Weather Events, Including the Bomb Cyclone*, Questions for the Record Submitted to Mr. Andrew Ott, Response to Question 1 from Sen. Lisa Murkowski (Jan. 23, 2018) available at <http://www.pjm.com/-/media/library/reports-notice/special-reports/2018/20180220-qfrs-submitted-to-andrew-ott-from-20180123-senate-committee-hearing.ashx?la=en>.

excess reserves and capacity.”⁹ For the foregoing reasons, we believe there is no evidence to grant this request, nor is there any basis for the Department to take any other action that would interfere with operation of the PJM market.

Natural gas is an affordable, clean, and flexible fuel for electric generation. Within PJM specifically, it is a fuel that greatly enhances system reliability and resilience. PJM sits atop the Marcellus and Utica shale plays. These are among the most productive and fastest growing natural gas production areas in the world,¹⁰ with pipeline infrastructure that becomes more robust each year. FirstEnergy ignores these facts as well as other measures that PJM has taken to bolster generator performance such as its phased-in capacity performance rules that provide an incentive for generators to secure firmer fuel supplies, and which have already been shown to reduce forced outages.¹¹ Far from demonstrating an emergency, PJM’s response to the 2014 Polar Vortex and 2018 Bomb Cyclone show careful planning for an increasingly resilient grid.

II. Motion to Intervene

The NGSA hereby moves to intervene in this proceeding. Founded in 1965, NGSA represents integrated and independent energy companies that produce and market domestic natural gas, and is the only national trade association that solely focuses on producer-marketer issues related to the downstream natural gas industry. NGSA encourages the use of natural gas within a balanced national energy policy and supports the benefits of competitive markets. NGSA members trade, transact, and invest in the U.S. natural gas market in a range of different manners, and would be harmed by any exercise of Section 202(c) that restricts market competition and privileges uneconomic coal and nuclear generation. NGSA has consistently advocated for well-functioning power and natural gas markets, policies that support market transparency, efficient nomination and scheduling protocols, just and reasonable transportation rates, non-preferential terms and conditions of transportation services, and the removal of barriers to developing needed natural gas infrastructure. NGSA has a long-established commitment to ensuring a public policy environment that fosters a growing, competitive market for natural gas. NGSA also supports a

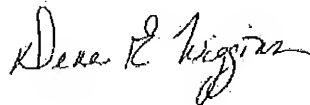
⁹ PJM Interconnection, *PJM Cold Snap Performance Dec. 28, 2017 to Jan. 7, 2018* at 1 (Feb. 26, 2018), available at <http://www.pjm.com/-/media/library/reports-notice/weather-related/20180226-january-2018-cold-weather-event-report.ashx> (“PJM Cold Snap Performance Report”).

¹⁰ See U.S. Energy Information Administration, *Dry shale gas production estimates by play at Appalachia region drives growth in U.S. natural gas production since 2012* (Dec. 4, 2017) at <https://www.eia.gov/naturalgas/data.php#production>; see also, U.S. Energy Information Administration <https://www.eia.gov/todayinenergy/detail.php?id=33972>.

¹¹ PJM Interconnection, *PJM Cold Snap Performance Dec. 28, 2017 to Jan. 7, 2018* (Feb. 26, 2018) at 20.

balanced energy future, one which ensures a level playing field for all market participants and eliminates inappropriate regulatory barriers to supply.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dena E. Wiggins". The signature is fluid and cursive, with a large initial "D" and a stylized "W".

Dena E. Wiggins
President & CEO
Natural Gas Supply Association
1620 Eye Street, NW, Suite 700
Washington, DC 20006
dena.wiggins@ngsa.org

From: Pavlik, Greg (US - MABS)
To: AskOE
Subject: DOE should not bail out the power plants
Date: Monday, April 16, 2018 12:55:43 PM

We've been hearing for years about how the government should NOT be in the business of picking winners and losers. FirstEnergy isn't the victim of a natural disaster and the US isn't actively engaged in a war that's threatening the coal/nuclear power generation sector in any way whatsoever. FirstEnergy is losing money because other sources of power are cheaper and more readily available. Let the market adjust itself. Do not waste taxpayer dollars on a bail-out.

Greg Pavlik
Hudson, OH

Meggitt Aircraft Braking Systems Corporation d/b/a Meggitt Aircraft Braking Systems

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From: Nick
To: ~~AskOE~~
Subject: DO NOT Bail Out FirstEnergy
Date: Monday, April 16, 2018 3:20:31 AM

To Whom it May Concern:

DO NOT Bail Out FirstEnergy. Doing so would be a flagrant abuse of Section 202(c) for the benefit FirstEnergy at the expense of taxpayers. It would reward mismanagement and subsidize dying technologies. The taxpayers should not shoulder the burden of solving the financial problems of private companies.

Sincerely,

Nick Providakis
Tallahassee, FL

From: Ted Romer
To: [AskOE](#)
Subject: Regarding "bailouts" for First Energy
Date: Monday, April 16, 2018 11:58:59 AM

Do not bail them out. First Energy made bad business decisions. They do not deserve a bailout. Do not use taxpayer money and do not force consumers to pay higher rates for electricity. Doing so rewards the bad decisions made by First Energy and will only encourage First Energy and other generators to make more bad decisions in the future.

Coal is dead. Republican leadership is flat out wrong. Coal is dead.

Respectfully,

Ted Romer

From: Will Toperoff
To: AskOE
Subject: Coal and nuclear bailout
Date: Monday, April 16, 2018 2:43:27 PM

Secretary Perry:

Please do not use our tax dollars to bail out fossil fuel and nuclear power companies when it is already established that these are huge sources of environmental destruction and pose an existential threat to our democracy and the world. Please use our tax dollars to invest in clean energies such as wind, solar, tidal and geothermal sources or even to find further research into fusion. These hold the promise of being environmental, good for our nation's economy and even for world peace.

Thank you.
Will Toperoff
SanDiego, CA

Sent from BlueMail

October 13, 2017

Federal Energy Regulatory Commission
Secretary of the Commission
888 First Street, NE
Washington, DC 20426

Re: Grid Resiliency Pricing Rule
FERC Docket No. RM18-1-000

**COMMENTS OF THE UTILITY WORKERS UNION OF AMERICA, LOCAL
UNION 457 IN SUPPORT OF THE PROPOSED RESILIENCY RULE**

On September 28, 2017, the Department of Energy (“DOE”) issued the “Grid Resiliency Pricing Rule” (the “Proposal”) directing the Federal Energy Regulatory Commission (“FERC”) to adopt a rule requiring operators of organized markets to “ensure that certain reliability and resiliency attributes of electric generation sources are fully valued.” Such a rule, as contemplated by the regulatory language of the Proposal, will ensure that existing nuclear and coal-fired electric generating stations in Ohio will be compensated appropriately and fully for their costs of operation and will avoid premature retirement. Adoption of that rule will thus sustain the long-term viability of critical power plants, preserve and create jobs, maintain electric reliability, and provide substantial economic benefits to the many hard-working Americans living throughout the region.

UWUA Local 457 strongly supports the Proposal and shares the Secretary’s urgency that FERC act promptly to direct operators of organized markets to issue the requested rule. FERC has the ability to act, and must act, without undue delay to avoid premature closure of crucial power plants and our members’ loss of critical economic and reliability benefits. FERC has thoroughly examined how electric markets function and how those markets affect the continued operation of crucial power plants needed for reliability for some time. FERC has the requisite

basis to act now. There is no time for delay. In addition to acting promptly, FERC should also direct organized market operators to issue a comprehensive and enduring set of rules, based on the regulatory language of the Proposal, for the proper compensation of critical power plants. Protracted proceedings undertaken by organized market operators that fail to develop fair, compensatory and transparent rules will only engender market uncertainty and delay in providing sufficient compensation to these facilities, thereby jeopardizing the operation of the very plants that the DOE seeks to maintain in operation.

I. COMMUNICATIONS

All communications, correspondence, and documents related to this proceeding should be directed to the following person:

Eric Cook
President
UWUA Local 457
(b) (6)

II. DESCRIPTION OF UWUA LOCAL 457

UWUA Local 457 is a progressive labor organization that represents individuals in the Electric Generation industry.

III. DESCRIPTION OF UWUA LOCAL 457'S INTEREST IN PROCEEDING

UWUA Local 457 is a party to a collective bargaining agreement with the owners of baseload coal and nuclear power plants located in Ohio. As a result, the wages, terms and conditions of employment of its members may be directly affected by the actions taken by the FERC and operators of organized markets in this proceeding. Thus, UWUA Local 457 members have a direct and substantial interest in this proceeding. As well, the unique perspective of UWUA Local 457 and its members will only serve to enhance the record in this proceeding.

IV. COMMENTS

The communities where struggling baseload coal and nuclear power plants are located are dependent on the jobs and economic development opportunities the power plants provide. The recent decline in Ohio's electric power industry, for example, has led to reductions in operations and capital improvement expenditures at numerous power production and manufacturing facilities across Ohio. This has led to extreme hardship for the thousands of union workers employed in this industry as well as their families.

It is imperative that baseload coal and nuclear plants continue to operate in light of these dire circumstances. Baseload coal and nuclear plants in Ohio provide thousands of MWs of reliable power, and provide union jobs and economic opportunities to UWUA Local 457 members. UWUA 457 has approximately 250 members who work at the Sammis coal generating station. The maintenance and capital improvement work on these plants also supports the local economy by creating hundreds of well-paying union jobs for contractors during plant outages. In addition, these plants contribute millions each year in state and local tax revenues that support local schools, police and fire departments and other vital public services. The loss of jobs, tax revenue, and the ripple effect of such losses throughout the local economy, will have a severely detrimental impact on the region.

The issuance of a rule preserving the continued operation of resilient baseload coal and nuclear power plants will maintain a reliable supply of electricity for the region's energy-intensive economy in two ways. First, the preservation of certain plants will avoid the need to replace lost generation with imports and the associated construction of infrastructure to facilitate such importation. Preserving baseload coal and nuclear power plants will keep these needed,

reliable facilities running close to home without the need to depend on distant resources, particularly during catastrophic events like severe storms, to fulfill our region's dynamic need for reliable electricity.

Second, premature plant closures will deplete the stable of highly skilled (and specifically trained and experienced) employees, many of whom have lived in the region for several years and who take great pride in their work. With a depletion of this skilled and experienced group of workers, and the possible replacement of these workers with more distant and perhaps less-skilled individuals, we will see a direct and adverse impact on our ability to maintain the generation facilities that continue to operate and, as important, our ability to respond promptly to severe contingencies affecting the operation of these remaining plants in operation. In short, allowing baseload coal and nuclear power plants to close prematurely will have an adverse impact on the reliability of the region's electricity supply and on the reliable operation of the regional electricity system.

Rates for the sale of electricity that are inadequate to sustain the operation of base load generation facilities that provide reliability and resiliency support cannot be considered to be just and reasonable. Because of the loss of jobs, the significant reduction in payments to local governments, and the decline in electricity resource and grid reliability that would result from deactivation of the nuclear and coal-fired generating facilities in Ohio, it is essential that the FERC adopt a rule, such as that proposed by DOE, which will ensure that such generating facilities are fully compensated for their costs and will remain in operation.

In order to mitigate the risk that such generating units may be deactivated prematurely, UWUA Local 457 strongly urges FERC to adopt the rule proposed by the DOE as promptly and comprehensively as possible. FERC has a sufficient record to act that will be further bolstered by

the comments considered in this proceeding. FERC has thoroughly considered the impact of electric markets on the sustained operation of at-risk power plants and, as noted by the Secretary of the DOE, the time to act is now given the severe impacts to system reliability and resilience, and national security, attendant to the premature closure of crucial power plants. Any protracted delay in creating fully compensatory market rules will only exacerbate the problem of premature closures.

In acting promptly, FERC should also direct the organized market operators to issue a rule that is not only compensatory (and based on the regulatory language of the Proposal) but comprehensive and enduring. The rules to be issued by operators of organized markets should be fair and transparent, and should ensure that critical power plants can continue to operate for the long-term and without the prospect of repeated re-examination and adjustment to their market compensation. The uncertainty that less than comprehensive and enduring market rules will engender will defeat the very purpose of preserving the extended operation of these much-needed power plants.

Respectfully submitted,

Eric Cook
President
UWUA Local 457

Document Content(s)

UWUA Local 457 Labor Comments 10.13.17.DOCX.....1-5

From: dcy665
To: AskOE
Subject: Section 202, Federal Power Act
Date: Monday, April 16, 2018 6:03:25 AM

Sirs, in particular clueless Secretary Perry,

From wanting to shutdown the Dept of Energy to deciding it must be used to keep Trump supporters out of bankruptcy is quite a leap. Not a leap of faith as I seriously doubt anyone in the country that isn't either the owner of FirstEnergy or a coal company employee has any faith in the coal business or this proposal.

The Federal Government of the USA should not be bailing out failed businesses that aren't able to compete. There is an Executive branch, it can request to the Legislative branch that the situation could be address in a proper manner. Sadly Mr. Perry is slightly out of touch for understanding what a national emergency is. A failing coal mine is not a national emergency. Of course, if we shut down all work on safeguarding our nuclear weapons then we have have three things; money for coal, a serious loss of deterrence and no counter to Russia/China and the other nuclear nations. But Secretary Perry would keep a promise he made to the voters. So there's that.

Coal will have uses, but powering America with polluting plants that cost more to run will hopefully not be the norm. Coal plants cannot adjust to the modern economy/environment. They are slow to start, slow to adjust generation capabilities and clearly are untenable without assistance.

Putting effort into modernizing the grid and securing the grid's infrastructure is worth Federal dollars. Bailing out a business is not a worthy goal. It is definitely not a national emergency.

David C Young
Portland, Oregon
US Citizen

From: joshua blumenkopf
To: AskOE
Subject: Section 202(c)
Date: Tuesday, April 17, 2018 3:23:41 PM

There is no grid emergency and no need for bailouts of FirstEnergy or any other firm that is outcompeted by cheaper, newer, electricity plants.

Sincerely,
Joshua Blumenkopf

From: Earl Dukerschein
To: AskOE
Subject: Emergency relief for Coal and Nuclear plants
Date: Tuesday, April 17, 2018 4:24:34 PM

Hello,

It is my opinion that we are moving to a distributed, resilient, electrical grid. Spend money on moving that forward, instead of holding it back.

Earl Dukerschein
(b) (6)

From: Paul Cameron
To: [AskOE](#)
Subject: Comments - Energy supply emergency under Section 202(c)
Date: Tuesday, April 17, 2018 9:40:38 AM
Attachments: [IBEW Local 459.pdf](#)

Dear DOE,

As the Business Manager of I.B.E.W. Local 459, I previously sent a correspondence on behalf of the nearly 1900 members I represent asking for the government to take action in this matter to support our electric generation plants.

We are asking your consideration to support base-load generation. The nuclear and coal-fired units must be compensated appropriately for their full cost of operation to maintain these important assets. They are needed for grid resiliency, support of our families and the tax base of the communities where the plants are located. The closure of these facilities is devastating in many ways. We urge you to issue an emergency order pursuant to Federal Power Act Section 202(c).

Thank you for your time and consideration on this very important matter.

Paul L. Cameron

Business Manager/Financial Secretary

I.B.E.W. Local 459

(b) (6)

October 19, 2017

Federal Energy Regulatory Commission
Secretary of the Commission
888 First Street, NE
Washington, DC 20426

Re: Grid Resiliency Pricing Rule
FERC Docket No. RM18-1-000

**COMMENTS OF THE INTERNATIONAL BROTHERHOOD OF ELECTRICAL
WORKERS, LOCAL UNION 459 IN SUPPORT OF THE PROPOSED RESILIENCY
RULE**

On September 28, 2017, the Department of Energy (“DOE”) issued the “Grid Resiliency Pricing Rule” (the “Proposal”) directing the Federal Energy Regulatory Commission (“FERC”) to adopt a rule requiring operators of organized markets to “ensure that certain reliability and resiliency attributes of electric generation sources are fully valued.” Such a rule, as contemplated by the regulatory language of the Proposal, will ensure that existing nuclear and coal-fired electric generating stations in Pennsylvania will be compensated appropriately and fully for their costs of operation and will avoid premature retirement. Adoption of that rule will thus sustain the long-term viability of critical power plants, preserve and create jobs, maintain electric reliability, and provide substantial economic benefits to the many hard-working Americans living throughout the region.

IBEW Local 459 strongly supports the Proposal and shares the Secretary’s urgency that FERC act promptly to direct operators of organized markets to issue the requested rule. FERC has the ability to act, and must act, without undue delay to avoid premature closure of crucial power plants and our members’ loss of critical economic and reliability benefits. FERC has thoroughly examined how electric markets function and how those markets affect the continued operation of crucial power plants needed for reliability for some time. FERC has the requisite basis to act now.

There is no time for delay. In addition to acting promptly, FERC should also direct organized market operators to issue a comprehensive and enduring set of rules, based on the regulatory language of the Proposal, for the proper compensation of critical power plants. Protracted proceedings undertaken by organized market operators that fail to develop fair, compensatory and transparent rules will only engender market uncertainty and delay in providing sufficient compensation to these facilities, thereby jeopardizing the operation of the very plants that the DOE seeks to maintain in operation.

I. COMMUNICATIONS

All communications, correspondence, and documents related to this proceeding should be directed to the following person:

Paul Cameron
Business Manager & Financial Secretary
IBEW Local 459
408 Broad St., Johnstown, PA 15906
814-535-7655
Paulibew459@gmail.com

II. DESCRIPTION OF IBEW LOCAL 459

IBEW Local 459 is a progressive labor organization that represents approximately 1,850 individuals working in the utility and baseload generation industry in Pennsylvania.

III. DESCRIPTION OF IBEW LOCAL 459'S INTEREST IN PROCEEDING

IBEW Local 459 is a party to collective bargaining agreements with owners of large baseload coal power plants located in Pennsylvania. As a result, the wages, terms and conditions of employment of our members may be directly affected by the actions taken by the FERC and operators of organized markets in this proceeding. Thus, IBEW Local 459 members have a direct and substantial interest in this proceeding. As well, the unique perspective of IBEW Local 459 and its members will only serve to enhance the record in this proceeding.

IV. COMMENTS

The communities where struggling baseload coal and nuclear power plants are located are dependent on the jobs and economic development opportunities the power plants provide. The recent decline in Pennsylvania's electric power industry, for example, has led to reductions in operations and capital improvement expenditures at numerous power production and manufacturing facilities across Pennsylvania. This has led to extreme hardship for the thousands of union workers employed in this industry as well as their families.

It is imperative that baseload coal and nuclear plants continue to operate in light of these dire circumstances. Baseload coal and nuclear plants in Pennsylvania provide thousands of MWs of reliable power, and provide union jobs and economic opportunities to IBEW Local 459 members. The Keystone, Conemaugh, Homer City, Shawville and Seward generating stations produce approximately 6700 MW of power along with directly employing approximately 675 IBEW Local 459 members, and maintenance and capital improvement work on these plants supports the local economy by creating hundreds of well-paying union jobs for contractors. In addition, these plants contribute millions each year in state and local tax revenues that support local schools, police and fire departments and other vital public services. The loss of jobs, tax revenue, and the ripple effect of such losses throughout the local economy, will have a severely detrimental impact on the region.

The issuance of a rule preserving the continued operation of resilient baseload coal and nuclear power plants will maintain a reliable supply of electricity for the region's energy-intensive economy in two ways. First, the preservation of certain plants will avoid the need to replace lost generation with imports and the associated construction of infrastructure to facilitate such importation. Preserving baseload coal and nuclear power plants will keep these needed, reliable

facilities running close to home without the need to depend on distant resources, particularly during catastrophic events like severe storms, to fulfill our region's dynamic need for reliable electricity.

Second, premature plant closures will deplete the stable of highly skilled (and specifically trained and experienced) employees, many of whom have lived in the region for several years and who take great pride in their work. With a depletion of this skilled and experienced group of workers, and the possible replacement of these workers with more distant and perhaps less-skilled individuals, we will see a direct and adverse impact on our ability to maintain the generation facilities that continue to operate and, as important, our ability to respond promptly to severe contingencies affecting the operation of these remaining plants in operation. In short, allowing baseload coal and nuclear power plants to close prematurely will have an adverse impact on the reliability of the region's electricity supply and on the reliable operation of the regional electricity system.

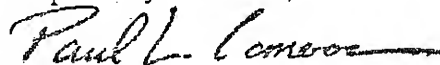
Rates for the sale of electricity that are inadequate to sustain the operation of base load generation facilities that provide reliability and resiliency support cannot be considered to be just and reasonable. Because of the loss of jobs, the significant reduction in payments to local governments, and the decline in electricity resource and grid reliability that would result from deactivation of the nuclear and coal-fired generating facilities in Pennsylvania, it is essential that the FERC adopt a rule, such as that proposed by DOE, which will ensure that such generating facilities are fully compensated for their costs and will remain in operation.

In order to mitigate the risk that such generating units may be deactivated prematurely, IBEW Local 459 strongly urges FERC to adopt the rule proposed by the DOE as promptly and comprehensively as possible. FERC has a sufficient record to act that will be further bolstered by the comments considered in this proceeding. FERC has thoroughly considered the impact of

electric markets on the sustained operation of at-risk power plants and, as noted by the Secretary of the DOE, the time to act is now given the severe impacts to system reliability and resilience, and national security, attendant to the premature closure of crucial power plants. Any protracted delay in creating fully compensatory market rules will only exacerbate the problem of pre-mature closures.

In acting promptly, FERC should also direct the organized market operators to issue a rule that is not only compensatory (and based on the regulatory language of the Proposal) but comprehensive and enduring. The rules to be issued by operators of organized markets should be fair and transparent, and should ensure that critical power plants can continue to operate for the long-term and without the prospect of repeated re-examination and adjustment to their market compensation. The uncertainty that less than comprehensive and enduring market rules will engender will defeat the very purpose of preserving the extended operation of these much-needed power plants.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Paul L. Cameron", with a long horizontal flourish extending to the right.

Paul Cameron
Business Mgr. and Financial Secretary
IBEW Local 459

From: Mac User
To: AskOE
Subject: Bailing out Coal & Nuclear?????
Date: Tuesday, April 17, 2018 10:25:58 PM

What a crock of manure! Let the coal industry die in its own filth. Feel sorry for the coal miners? Train them for other jobs!

On Thursday, Perry admitted that the failure of his proposed coal compensation rule led him to consider using Section 202(c) to keep coal plants like those owned by FirstEnergy open. Perry's remarks in front of the House Subcommittee on Energy suggest he's hoping to build a case for the use of Section 202(c) by casting the current state of affairs in the US as an emergency.

"When we look at national security in particular, if you're in New York City and Wall Street were to lose power, I think anyone would say that puts our national security in jeopardy," Perry said.

The emergency exists on a personal level, too, the secretary asserted. "Why should any one be put in the situation to choose between turning the lights on and keeping my family warm?" Perry said, which seems to be a reference to how the natural gas supply is divided between residential heating and electric generation use. Perry added later, "It is imperative that we don't allow political decisions to be made relative to our... power security in the country." It was unclear to which political decisions the secretary was referring.

From: Pascal F. Martin
To: AskOE
Subject: Use of section 202(c) to bail out market losers
Date: Tuesday, April 17, 2018 2:23:06 AM

Dear sir,

I learned about the DOE plans to bail out bankrupt company FirstEnergy by invoking the authority conferred under section 202(c) to subsidize the continuing operation of its power plants.

I note that no grid operators seem to have requested such action, and that the general consensus is that there is a surplus of power generation available. In fact, the General Electric company is experiencing a downturn in the sales of its gas turbines, which it justifies by invoking this surplus.

It is also recognized that the competitive pressure on coal and nuclear power plants is caused by the low price of gas, which is due to the significant production increase thanks to the use of fracking technology. This administration has called for the growth of oil and gas production, which would certainly lead to a decrease in the price of gas, and more competitive pressure on coal and nuclear power plants.

Market conditions lead energy companies to migrate from coal and nuclear to gas and renewable energy simply due to their lower cost. This is freedom in action.

Apparently this administration does not like free market, and it seems to prefer controlling the economy by fiat. The general consensus is that this will lead to increased electricity price, lowering the purchasing power of the American people.

This begs a question: has the federal government decided to transform our free economy into a state-controlled one?

Has the current administration been infiltrated by communists?

Thank you.

Pascal Martin, Rancho Palos Verdes, CA.



Document 101

State of New Jersey
DIVISION OF RATE COUNSEL
140 EAST FRONT STREET, 4TH FL.
P.O. BOX 003
TRENTON, NEW JERSEY 08625

PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

STEFANIE A. BRAND
Director

April 17, 2018

VIA ELECTRONIC MAIL (AskOE@hq.doe.gov)

U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585

Re: Intervention of the New Jersey Division of Rate Counsel in FirstEnergy
Solutions Corp.'s Request for Emergency Action by the Department of
Energy under Section 202(c) of the Federal Power Act

Dear Sir/Madam:

This office represents the New Jersey Division of Rate Counsel ("NJDRRC") regarding FirstEnergy Solutions Corp.'s ("FES") Request for Emergency Action under Section 202(c) of the Federal Power Act submitted to the Department of Energy ("DOE") on March 29, 2018. On April 5, 2018, the NJDRRC submitted a Motion to Intervene to DOE Secretary James Richard Perry.

Subsequent to the NJDRRC's submissions, the DOE revised the section of its website regarding the DOE's Use of Federal Power Act Emergency Authority, stating the "DOE has established the AskOE@hq.doe.gov email address for the receipt of all materials related to Federal Power Act section 202(c). All public comments and requests should be sent in writing to AskOE@hq.doe.gov." The website also noted "[t]he provision of this process for submission of correspondence or comments on any pending application is for purposes of ensuring the receipt by the appropriate office and personnel within the Department."

Accordingly, the NJDRRC now re-submits its previously submitted Motion to Intervene to the AskOE@hq.doe.gov address. The NJDRRC reserves all rights in relation to the initial Motion to Intervene and Comments as of the time they were submitted to Secretary Perry.

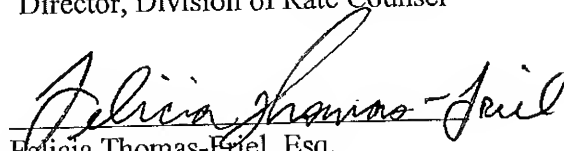
April 17, 2018
Page 2

Should you have any questions, please do not hesitate to contact me.

Respectfully submitted,

STEFANIE A. BRAND
Director, Division of Rate Counsel

By:

A handwritten signature in cursive script, reading "Felicia Thomas-Friel", written over a horizontal line.

Felicia Thomas-Friel, Esq.
Deputy Rate Counsel

cc: Service List (w/encl., by electronic mail)



State of New Jersey
DIVISION OF RATE COUNSEL
140 EAST FRONT STREET, 4TH FL
P.O. BOX 003
TRENTON, NEW JERSEY 08625

PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

STEFANIE A. BRAND
Director

April 3, 2018

Via Overnight and Electronic Mail

The Honorable Rick Perry
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585
the.secretary@hq.doe.gov

Mr. Bruce Walker
Assistant Secretary, DOE Office of Elec. Delivery & Energy Reliability
Office of Electric Reliability and Energy Reliability
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585
bruce.walker@hq.doe.gov

Ms. Catherine Jereza
Deputy Assistant Secretary
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585
catherine.jereza@hq.doe.gov

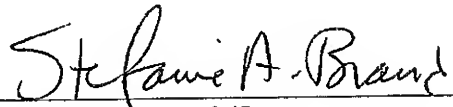
Re: Motion of New Jersey Division of Rate Counsel to Intervene

Dear Secretary Perry, Assistant Secretary Walker, and Deputy Assistant Secretary Jereza:

Attached is New Jersey Division of Rate Counsel's ("NJRC") Motion to Intervene in the proceeding concerning FirstEnergy Solutions Corp.'s ("FES") Request For Emergency Action Under Section 202(c) of the Federal Power Act. NJRC is the administrative agency charged under New Jersey Law with the general protection of the interests of utility ratepayers. *N.J.S.A.*

52:27E-50 *et seq.* NJRC is also a member of PJM Interconnection L.L.C., which will be affected by this FES request. NJRC opposes this FES request for emergency action. If this request is not denied outright, there should be a 60 day comment period, as requested by the Electric Power Supply Association *et al* on March 30, 2018.

Respectfully submitted, ,

A handwritten signature in cursive script that reads "Stefanie A. Brand". The signature is written in dark ink and is positioned above the printed name and title.

Stefanie A. Brand, Esq.
Director, New Jersey Division of Rate Counsel

UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY

Request for Emergency Order Pursuant)
To Federal Power Act Section 202(c) By)
FirstEnergy Solutions Corp.) DOE Docket No. _____

MOTION OF NEW JERSEY DIVISION OF RATE COUNSEL TO INTERVENE

The New Jersey Division of Rate Counsel (“NJRC”), by and through its counsel, hereby moves to intervene in the above-captioned proceeding and protests the March 29, 2018 Request for Emergency Order Pursuant to Federal Power Act Section 202(c) by FirstEnergy Solutions Corp. (“FES”), pursuant to Rules 211 and 214 of the Federal Energy Regulatory Commission’s (“Commission”) Rules of Practice and Procedure, 18 C.F.R. §§ 385.211 and 385.214.

I. PROCEDURAL BACKGROUND

On March 29, 2018, FES issued a request by letter (“Request”) to the Honorable Rick Perry, US Secretary of Energy, requesting that the Secretary use emergency authority under Federal Power Act Section 202(c) to find that an emergency condition exists in the PJM Interconnection L.L.C. (“PJM”) territory requiring immediate attention. In its Request, FES asks that the Secretary order “certain existing nuclear and coal-fired generators” to contract with PJM for energy, capacity and ancillary services to “maintain the stability of the electric grid.” FES also requests that the Secretary order PJM to “promptly compensate at-risk merchant nuclear and coal-fired power plants for the full benefits they provide.” The Request has been served on over 100 affected parties.

II. MOTION TO INTERVENE

NJ Rate Counsel is the administrative agency charged under New Jersey Law with the general protection of the interests of utility ratepayers. *N.J.S.A. 52:27E-50 et seq.* As the regulatory agency charged with protecting the utility ratepayers in the State of New Jersey, NJ Rate Counsel's participation is unique and in the public interest. Pursuant to C.F.R. §385.214(b)(2), NJ Rate Counsel is an "entity" within the meaning of Rule 214(b)(2) and NJRC accordingly moves for intervention.

If the FES Request is granted, cost responsibility for payments made pursuant to the Emergency Order may be recovered from consumers throughout the PJM region, including New Jersey. NJRC strongly opposes the Request and reserves the right to supplement this pleading to explain why it is unjust and unlawful.

NJ Rate Counsel will not be adequately represented by any other party to this proceeding, but may join with similarly situated entities. Good cause exists to grant this Motion to Intervene in this proceeding as NJ Rate Counsel represents NJ ratepayers directly affected by the FES request and is therefore a stakeholder in the outcome of the proceeding.

III. SERVICE OF DOCUMENTS

The following persons are designated by NJRC to receive service and communications on its behalf with regard to this proceeding:

Stefanie A. Brand, Esq.
Director, New Jersey Division of Rate Counsel
140 East Front Street
Trenton, NJ 08625
Phone: (609) 984-1460
Fax: (609) 292-2923
Email: sbrand@rpa.nj.gov

Brian Lipman, Litigation Manager
Henry M. Ogden, Esq.
Felicia Thomas-Friel, Esq.
140 East Front Street
P.O. Box 003
Trenton, NJ 08625-003
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Email: blipman@rpa.nj.gov
hogden@rpa.nj.gov
fthomas@rpa.nj.gov

IV. STATEMENT OF OPPOSITION

Rule 214(b)(1) requires the movant to state its preliminary position. NJRC opposes the relief sought by FES. The available evidence, not cited in the Request, demonstrates that no need exists for the requested relief and certainly no emergency exists that would justify application of Section 202(c) of the Federal Power Act.

NJRC respectfully urges the Department to give all interested parties sufficient time to present their responses to the FES Request before ruling on the Request. Accordingly, NJRC supports the March 30, 2018 filing by the Electric Power Supply Association and other organizations requesting a 60-day comment period.

V. CONCLUSION

For all the foregoing reasons, NJRC respectfully requests that the Department grant NJRC's motion to intervene in this proceeding, and, if the Department does not reject the FES Request outright, provide all interested parties 60 days to file comments on the Request.

Respectfully submitted,

NEW JERSEY DIVISION OF RATE COUNSEL

/s/ Stefanie A. Brand
Stefanie A. Brand, Esq.
Director, New Jersey Division of Rate Counsel
140 East Front Street
Trenton, NJ 08625
Phone: (609) 984-1460
Fax: (609) 292-2923
Email: sbrand@rpa.nj.gov

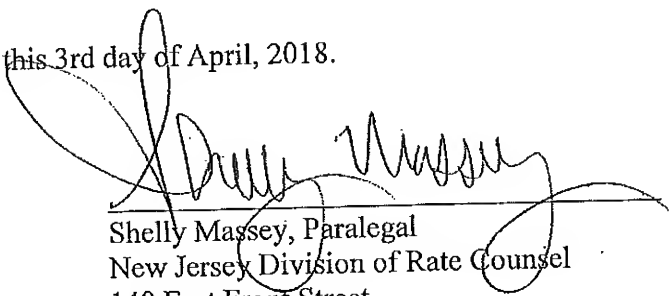
Brian Lipman, Litigation Manager
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hogden@rpa.nj.gov
fthomas@rpa.nj.gov

Counsel to the New Jersey Division of Rate Counsel
Dated: April 3, 2018

CERTIFICATE OF SERVICE

I hereby certify that I have this day served, via overnight mail or electronic transmission the foregoing upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Trenton, NJ this 3rd day of April, 2018.



Shelly Massey, Paralegal
New Jersey Division of Rate Counsel
140 East Front Street
Trenton, NJ 08625
Phone: (609) 984-1460
Fax: (609) 292-2923
Email: smassey@rpa.nj.gov

United Mine Workers of America

CECIL E. ROBERTS
INTERNATIONAL PRESIDENT



TELEPHONE
(703) 291-2420
FAX (703) 291-2451

Document 102

UNITED MINE WORKERS' HEADQUARTERS
18354 QUANTICO GATEWAY DRIVE, SUITE 200

Triangle, VA

22172-1779

April 17, 2018

The Honorable Rick Perry
Secretary
U.S. Department of Energy
1000 Independence Avenue
Washington, DC 20585-1000

Via E-Mail Transmission to AskOE@hq.doe.gov

Re: Section 202(c) Relief for Baseload Power Plants

Dear Secretary Perry:

I am writing on behalf of the active and retired members of the United Mine Workers of America. The livelihoods of UMWA members, their families, and their communities are critically dependent upon preserving and protecting the economic viability of the nation's fleet of coal-based power plants. These plants are subject to unfair competition from subsidized energy sources and market rules that do not value their unique benefits to the reliability and resiliency of the nation's electric power grid.

We supported your proposed Grid Resiliency Pricing Rule, and were disappointed that FERC rejected the rule in favor of pursuing a "holistic" assessment of the multiple challenges to electric reliability and resiliency posed by extreme weather events, terrorist acts, unfair regulatory pricing regimes, and other factors. We do not believe that this study, and any related FERC action, can be undertaken in a time frame that will provide meaningful relief from the unending stream of announced baseload plant closures. FERC indicates that some 26,000 Megawatts of coal and nuclear baseload is expected to close within just the next two years.

The recently announced FirstEnergy Solutions bankruptcy - presaging the near-term closures of six large coal and nuclear facilities serving the Midwest and Mid-Atlantic regions - makes clear the urgency of these threats to national energy security, and to the welfare of thousands of workers and their communities.

UMWA respectfully suggests a two-prong approach to address the current and pending threats to electric reliability and resiliency posed by the ever-increasing share of electric generation provided by subsidized intermittent renewable resources and natural gas plants subject - to a large degree - to interruptible gas supplies.

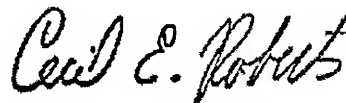
First, we believe that it is timely and appropriate for you to exercise your authority under Section 202(c) to provide immediate relief for the coal and nuclear baseload facilities that are at risk due to the FirstEnergy Solutions bankruptcy. Just one of these plants - the relatively new Pleasants generating station in West Virginia, supports 27% of the local tax base while providing highly-paid jobs to hundreds of workers in the utility, coal mining, and transportation sectors. The recent NETL analysis of the Bomb Cyclone event documents the vital role of baseload generation such as Pleasants and the other bankrupted FirstEnergy Solutions plants in avoiding a catastrophic collapse of the eastern grid.

Second, with respect to the much larger number of coal and nuclear baseload facilities operating in "competitive" markets, we recommend that DOE consider the application of other authorities available to the Department to help minimize the ongoing premature retirement of this capacity. At the same time, DOE should support, through its own modeling capabilities, an accelerated, action-oriented conclusion to FERC's holistic analysis of reliability and resiliency.

We suggest this bifurcated approach because a more limited, targeted exercise of 202(c) authority is consistent with the regulatory history of this provision, while the immediate nature of the risks to the eastern electric grid posed by the FirstEnergy Solutions bankruptcy cannot be addressed in a timely manner by the FERC process.

Thank you for your consideration of UMWA's views. I would be happy to discuss them further with you at any time.

Sincerely,

A handwritten signature in black ink, reading "Cecil E. Roberts". The signature is written in a cursive, slightly slanted style.

Cecil E. Roberts

April 10, 2018

Honorable Rick Perry, Secretary
Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Dear Secretary Perry

(b) (6) I am writing to ask that you reject FirstEnergy's subsidiary First Energy Solution's (FES) request under section 202(c) of the Federal Power Act for a declaration of emergency. Our situation is not an emergency. As PJM has made clear: "Nothing we have seen to date indicates that an emergency would result from the [FirstEnergy] generator retirements."

As one who endorses a free-market economy, we know such inventions would be wrong and counterproductive. Granting FirstEnergy's request would be very disruptive to competitive markets and on that basis alone should be rejected.

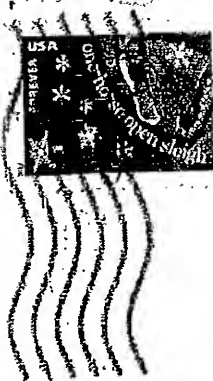
FirstEnergy has a long track record of bad management decisions that have resulted in its ratepayers having to pay some of the highest electricity rates in the country. To grant this request would be another ratepayer bailout for bad management. Beginning in the 1970s with the decision to build 9 nuclear units, FirstEnergy management has made a series of bad decisions. The mismanagement of the construction of the Perry I and Beaver Valley II nuclear units resulted in \$9 billion in cost overruns. Most of these costs were passed on to ratepayers in the 1980s even though these units represented excess capacity in the FirstEnergy generation portfolio. Only high rates and billions of dollars in "stranded cost" recovery in the form of a "competitive transition charge" have likely kept First Energy Solutions from declaring bankruptcy a long time ago.

Additionally, FirstEnergy has used a second phony argument for claiming it deserves a bailout. It claims it is not receiving sufficient compensation for the "unique benefits" that its nuclear units provide. FirstEnergy has been attempting to get the Ohio and Pennsylvania legislatures to give it a bailout in the form of "Zero Emissions Credits", another ratepayer charge. However, despite the myth that nuclear plants are a clean source of energy, the fact is they routinely vent some of the deadliest gases known to exist. And, the process to make commercial grade fuel for nuclear plants contributes to Climate Change.

Mr. Secretary, enough is enough. I urge you to do the right thing on behalf of the millions of ratepayers, not only in the FirstEnergy service territory, but throughout the PJM Interconnection: put an end to this history of gouging ratepayers to cover inept management.



Ronald Shissler
(b) (6)



CLEVELAND OH 440
11 APR 2018 PM 4 E

Received

APR 18 2018

MAIL SANITIZED

Honorable Rick Perry, Secretary
Dept. of Energy
1000 Independence Ave. SW
Washington, D. C. 20585

20585-
1000 Independence Ave. SW

From: Gene Grace
To: [AskOF](#)
Cc: [Tom Vinson](#); [Betsy R. Beck](#)
Subject: AWEA's Comment on Section 202(c) of the FPA
Date: Thursday, April 19, 2018 2:49:24 PM
Attachments: [image001.jpg](#)
[AWEA comments on Section 202\(c\).pdf](#)

Please find attached AWEA's comments on section 202(c) of the FPA.



Gene Grace
Senior Counsel
American Wind Energy Association

ggrace@awea.org email
202.383.2529 direct
(b) (6) cell

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April 19, 2018

Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Re: Comments of the American Wind Energy Association on the Request for Input on the Process for Considering Applications under section 202(c) of the Federal Power Act and the March 29, 2018 Request of First Energy Solutions for an Emergency Order Thereunder

Submitted via: AskOE@hq.doe.gov

The American Wind Energy Association (“AWEA”) hereby respectfully submits these comments in response to the Department of Energy’s (“DOE”) request for input on the process for consideration of applications under section 202(c) of the Federal Power Act (“FPA”) by the Secretary of Energy.¹ AWEA’s comments largely respond to the March 29 “emergency order” application made by FirstEnergy Solutions, on behalf of certain of its subsidiaries (collectively, FirstEnergy),² requesting that the Secretary of Energy require PJM Interconnection and, by extension, electricity consumers in the PJM region, to provide “full cost recovery” for certain merchant generating plants in its footprint. The request should be rejected as FirstEnergy has neither demonstrated the existence of an emergency that would support action by Secretary of Energy under Federal Power section 202(c), nor shown that its requested relief is reasonable under that section of the FPA or any other thereunder.

¹ 16 U.S.C. § 824a(c) (2017).

² A day prior to the request, FirstEnergy Solutions filed notice with PJM that three of the company’s nuclear power plants would be deactivated or sold during the next three years. On March 31 FirstEnergy Solutions, its subsidiaries and FirstEnergy Nuclear Operating Company filed voluntary petitions under Chapter 11 of the Federal Bankruptcy Code with the U.S. Bankruptcy Court in the Northern District of Ohio in Akron.

I. Process for Considering 202(c) Applications: Should Only be Used to Address Imminent Emergencies

At this time, AWEA does not offer detailed comments on a generic process under which 202(c) applications should be addressed. However, in general, we think that DOE should consider such applications in a transparent manner—providing notice to all interest stakeholders of the application. In addition, to the fullest extent possible, DOE should seek comment from interested stakeholders before taking action on a specific application; if an emergency situation exists that does not afford time for comment prior to taking action on an application, DOE should strive to seek comment thereon immediately after taking action.

Section 202(c) is expressly limited to “emergencies” or other “sudden” events, and DOE acknowledges on its own website that it only enables the agency to impose temporary measures due to an “emergency” or other “sudden” circumstance.³ Since section 202(c) provides a narrow and limited mechanism for the Secretary “to require temporary connections of facilities and such generation, delivery, interchange, or transmission of electric energy” during emergencies, it should only be used in circumstances that truly meet that standard. While section 202(c) does not define either “emergency” or “sudden,” the dictionary definitions of these words reinforce that they mean an imminent crisis that is often unexpected.⁴ Accordingly, any order issued under section 202(c) should, consistent with the statutory mandate and implementing regulations, be a

³ DOE’s Use of Federal Power Act Emergency Authority,” available at <https://www.energy.gov/oe/services/electricity-policy-coordination-and-implementation/other-regulatory-efforts/does-use>.

⁴ See “Emergency,” BLACK’S LAW DICTIONARY 2d Ed., <https://thelawdictionary.org/emergency/> (“Situation requiring immediate attention and remedial action. Involves injury, loss of life, damage to property, or catastrophic interference with the [sic] normal activities. A sudden, unexpected, or impending situation”); “Sudden,” OXFORD ENGLISH DICTIONARY ONLINE, <https://en.oxforddictionaries.com/definition/sudden> (“Occurring or done quickly and unexpectedly or without warning.”).

current or imminent emergency and the order should be temporary in nature—although it should be able to be extended if an emergency continues.

The Secretary should summarily dismiss applications for an emergency order if the evidence does not support a finding that the emergency is present or imminent. Neither section 202(c) nor the DOE's implementing regulations contemplate broad, protracted intervention in wholesale energy markets. As discussed further below, the Secretary's emergency authority simply cannot be invoked based on claims that plant retirement trends and over-reliance on a particular type of generation may pose reliability challenges some years in the future.

II. FirstEnergy's 202(c) Application

FirstEnergy has not demonstrated the existence of an emergency within the meaning of section 202(c) and, therefore, the Secretary of Energy should reject the request.

The crux of FirstEnergy's claim is that an emergency exists because of the retirement of merchant coal and nuclear plants that it alleges are necessary for the reliable and resilient operation of the grid in the PJM region, which would otherwise be overly dependent on other forms of generation that lack fuel security. FirstEnergy asserts that the Federal Energy Regulatory Commission ("FERC") and PJM have not done enough to prevent coal and nuclear plant retirements, arguing, among other things, that PJM markets do not adequately compensate the claimed reliability and resiliency benefits of traditional baseload units with onsite fuel supplies.

FirstEnergy's general claims concerning the potential adverse impacts of coal and nuclear plant retirements in PJM do not establish the existence of an emergency within the meaning of section 202(c), let alone one that would justify imposing cost of-service payments for merchant

plants on consumers in PJM for at least a four-year period. FirstEnergy's claimed "emergency" is, at the end of the day, based on economics.

FirstEnergy contends that merchant coal-fired and nuclear plants in PJM are inadequately compensated for the reliability and resilience benefits they provide. DOE's regulations specifically state, however, that "[s]ituations where a shortage of electric energy is projected due solely to the failure of parties to agree to terms, conditions or other economic factors relating to service, generally will not be considered as emergencies unless the inability to supply electric service is imminent."⁵ Moreover, section 202(c) unambiguously requires that any compensation required by the Secretary be "just and reasonable,"⁶ and an unjustified out-of-market subsidy to one class of resources would certainly not meet that test.

For the sake of argument, even if there is a threat, it is certainly not imminent. The request by FirstEnergy cites plant retirements that may occur in the next several years, which does not demonstrate an "imminent" inability to supply electric service in PJM that could possibly justify characterizing the situation in PJM as an "emergency" within the meaning of section 202(c). For example, the nuclear facility closures upon which FirstEnergy primarily relies are scheduled to retire 2-3 years from now.⁷ In addition, FirstEnergy cites facilities that may retire—a mere possibility does not rise to an imminent crisis.⁸ There is simply no "emergency" or "sudden" event requiring a handout to coal and nuclear generation.

⁵ 10 C.F.R. § 371 (2017).

⁶ 16 U.S.C. § 824a(c) (2012).

⁷ FirstEnergy at 8, 20 (noting that Davis-Besse, Perry, and Beaver Valley are scheduled to retire in 2020 or 2021).

⁸ *Id.* at 21 (noting that units at the W.H. Sammis coal-fired plant "are in danger of being closed.")

In a March 30, 2018 letter to the Secretary of Energy, PJM responded to FirstEnergy's request. PJM stated without reservation that there is no immediate threat to system reliability. It also emphasized that plant retirements in the region are subject to review by PJM, which has "a range of tools available" to address any identified resource adequacy or reliability problems associated with plant retirements, including "offering full cost of service compensation . . . to induce assets to remain temporarily online." As also noted by PJM:

PJM does not believe that operating outside of the market to preserve a particular class or type of generation is needed at this time for reliability. The markets have been resilient in attracting new investment. In addition, a variety of tools exist as a backstop should specific generation be needed in a particular area.⁹

In addition, PJM's press statement comprehensively rebutted FirstEnergy's claims:

This is not an issue of reliability. There is no immediate emergency. Diversity of the fuel supply is important, but the PJM system has adequate power supplies and healthy reserves in operation today, and resources are more diverse than they have ever been. Nothing we have seen to date indicates that an emergency would result from the generator retirements. The potential for the retirements has been discussed publicly for some time. In anticipation, PJM took a preliminary look at the effect of the retirements on the system. We found that the system would remain reliable. We have adequate amounts of generation available.¹⁰

The purported problem prompting the March 29 Request is also the same one that was the subject of the Secretary's October 10 NOPR.¹¹ FERC already considered these same arguments in the proposed grid resilience pricing rule.¹² Indeed, the identical arguments

⁹ U.S. Sen. Comm. on Energy and Nat. Res., The Performance of the Electric Power System in the Northeast and Mid-Atlantic During the Recent Winter Weather Events, Including the Bomb Cyclone, Questions for the Record Submitted to Mr. Andrew Ott, Response to Question 1 from Sen. Lisa Murkowski (Jan. 23, 2018).

¹⁰ Available at <https://www.rtoinsider.com/pjm-ferc-resilience-rick-perry-first-energy-89464/>.

¹¹ See *Grid Resilience Pricing Rule*, Notice of Proposed Rulemaking, 82 Fed. Reg. 46,940 (Oct. 10, 2017) ("October 10 NOPR").

¹² *Reliability and Resilience Pricing, Order Terminating Rulemaking Proceeding, Initiating New*

FirstEnergy raises in its request were largely rejected by FERC in response to Secretary Perry's proposed grid resiliency pricing rule.¹³

In dismissing that proposal, FERC found that requiring full cost recovery for fuel-secure merchant generating facilities was not justified. While the January 8 Order noted that FirstEnergy and other commenters alleged grid resilience or reliability issues due to potential retirements of particular resources, FERC found "that these assertions do not demonstrate the unjustness or unreasonableness of the existing RTO/ISO tariffs."¹⁴ Instead, FERC held that none of the participants in the rulemaking, including FirstEnergy (which filed extensive comments), had demonstrated that existing tariffs were unjust and unreasonable or that the proposed cost-based rates for select generators were just and reasonable.¹⁵ In reaching this conclusion, FERC relied on "extensive comments" from PJM and other system operators which identified no "past or planned generator retirements that may be a threat to grid resilience."¹⁶ FirstEnergy is now asking the Secretary to second-guess FERC's expert findings on a record that was fully developed.

To justify its request, FirstEnergy relies primarily on a recently released National Energy Technology Laboratory report ("NETL Report") that incorrectly concludes that power plants with onsite fuel were critical to preserving "resiliency" during the "Bomb Cyclone" in late

Proceeding, and Establishing Additional Procedures, 162 FERC ¶ 61,012 (Jan. 8, 2018) ("January 8 Order").

¹³ *Id.*

¹⁴ January 8 Order at P 1.

¹⁵ *See id.* at PP 14-16.

¹⁶ *Id.* at P 15.

December to early January.¹⁷ The NETL Report departs from the majority of studies on the subject. This departure is primarily due to an erroneous conclusion in the report: since coal generation increased more in comparison to other forms of generation during stressful winter events, it was assumed as a sign that coal provided resiliency. The actual explanation is far simpler: there are many coal units that are rarely used due to their high-cost, and thus those coal plants are only used when demand and electricity prices are far higher than usual.¹⁸ PJM's analysis of its systems performance during that weather event undermines FirstEnergy's claims about the importance of onsite fuel. Most generator failures during the "Bomb Cyclone" event were due to equipment failures, not a lack of onsite fuel, so coal plants experienced a failure rate comparable to that of other energy sources.¹⁹ Further, many types of generators far outperform coal and nuclear generators in their capability to provide essential grid reliability services like flexibility, frequency regulation, and primary frequency response, as noted in a PJM chart included in DOE's August 2017 Staff Report.²⁰

DOE's Staff Report also contradicts FirstEnergy's claim that there is an emergency threat of generation shortages, noting that "All regions have reserve margins above resource adequacy

¹⁷ FirstEnergy Request at 3-8, citing National Energy Technology Laboratory, Reliability, Resilience, and the Coming Wave of Retiring Baseload Units Volume I: The Critical Role of Thermal Units During Extreme Weather Events (Mar. 13, 2018) ("NETL Report"), available at <https://www.netl.doe.gov/research/energy-analysis/search-publications/vuedetails?id=2594>.

¹⁸ Michael Goggin, Fossil Lab Misses Mark in Cold Weather "Resilience" Report, (Mar. 28, 2018), available at <http://sustainableferc.org/fossil-lab-misses-mark-in-cold-weather-resilience-report/>.

¹⁹ PJM Interconnection, PJM Cold Snap Performance Dec. 28, 2017 to Jan. 7, 2018 (Feb. 26, 2018), available at <http://www.pjm.com/-/media/library/reports-notice/weather-related/20180226-january-2018-cold-weather-event-report.ashx>, at 19, 21.

²⁰ Available at https://www.energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf at 86.

targets.”²¹ This was affirmed by NERC’s testimony to FERC that “the state of reliability in North America remains strong, and the trend line shows continuing improvement year over year,”²² as well as FERC staff analysis.²³ More recent NERC analysis indicates that reserve margins in PJM over the next several years will be around 30 percent, nearly twice the target level of 16.6 percent, and could go as high as 60 percent if planned generation additions materialize.²⁴ PJM’s own analysis has demonstrated that once reserve margins exceed 20 percent, the marginal benefit of additional reserve capacity for reducing customer outages is negligible.²⁵

Moreover, generation shortfalls account for a small fraction of customer electricity outages, with the vast majority caused by transmission and distribution system failures during extreme weather. The Rhodium Group found that generation inadequacy accounted for less than 1/10,000th of all customer-hours of outages, with fuel supply emergencies an even smaller share at fewer than 1 in 1.4 million.²⁶ Similarly, analysis in Public Utilities Fortnightly found that “distribution system outages appear to impose roughly two orders of magnitude more minutes of outage on customers than does resource adequacy . . . 146 compared to 1.2 minutes a year.”²⁷

²¹ *Ibid.*, at 66

²² Available at <https://www.ferc.gov/CalendarFiles/20170717080645-Cauley,%20NERC.pdf>.

²³ Available at <https://www.ferc.gov/market-oversight/reports-analyses/mkt-views/2017/10-19-17-A-3.pdf>.

²⁴ Available at https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_12132017_Final.pdf, page 10.

²⁵ Available at <http://www.pjm.com/~media/committees-groups/subcommittees/raas/20160927/20160927-2016-pjm-reserve-requirement-study.ashx>, page 39.

²⁶ Available at <https://rhg.com/research/the-real-electricity-reliability-crisis-doe-nopr/>.

²⁷ Available at <https://www.fortnightly.com/fortnightly/2010/04/reconsidering-resource-adequacy-part-1>.

Allocating finite ratepayer money to subsidizing uneconomic and unneeded generation rather than strengthening congested and antiquated transmission and distribution infrastructure will only harm reliability and resilience.

FirstEnergy is seeking out-of-market profit guarantees for an entire class of resources throughout PJM's territory. As such, the request would impair competitive wholesale markets, not only undermining a policy meant to protect consumers but also the investment decisions made throughout the energy sector. FERC has prudently instituted proceedings to further analyze and address the issues raised by the Secretary of Energy's proposed rule (considering whether pro-competitive market solutions are warranted), and those proceedings are ongoing and should not be undermined. FirstEnergy is clearly attempting to sidestep the involvement of interested stakeholders and the ability of FERC to consider matters that are rightfully within its jurisdiction and consider solutions, if warranted, consistent with its statutory mandate.²⁸ It would be inappropriate to allow FirstEnergy to seek essentially the same relief from the Secretary of Energy that FERC, applying its exclusive jurisdiction over the rates, terms, and conditions of wholesale sales of electricity, found to be unjustified.

III. Conclusion

For the foregoing reasons, AWEA strongly disputes the notion that drastic intervention in the markets using the Secretary's FPA section 202(c) emergency authority, or any other section

²⁸ Of note, FirstEnergy did not seek rehearing of FERC's January 8 Order.

under the FPA, is an appropriate solution to the concerns raised in FirstEnergy's application and respectfully requests that the Secretary deny FirstEnergy's request for an emergency order.

Sincerely,

/s/ Gene Grace

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Patricia A. Hoffman, Principal Deputy Assistant Secretary,
DOE Office of Electric Delivery & Energy Reliability
The Honorable Kevin J. McIntyre, Chairman, FERC
The Honorable Cheryl A. LaFleur, Commissioner, FERC
The Honorable Neil Chatterjee, Commissioner, FERC
The Honorable Robert F. Powelson, Commissioner, FERC
The Honorable Richard Glick, Commissioner, FERC

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April 19, 2018

Secretary Rick Perry
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Dear Secretary Perry,

The Energy and Commerce Committee has held numerous hearings over the past four years to examine all aspects of how American electricity is generated and priced into the competitive markets. After hearing testimony from industry experts and government officials, we are no closer to solving the complex question of how to provide a secure and resilient grid. We know recent severe weather along with cyber and physical threats, pose enormous challenges to grid reliability and resilience. The American consumer should not have to worry about the next cold weather event or cyber-attack.

I believe it is time for you to invoke his authority under Section 202(c) of the Federal Power Act or any other emergency authority the President or Secretary of Energy may have. We believe 202c or the Defense Production Act are appropriate mechanisms to protect the grid. The law gives authority to the Secretary when emergency conditions exist such as a shortage of electricity due to various reasons. The law also states, "or other causes" that threaten the availability of electricity. I believe there are important "other causes" which haven't adequately been addressed by FERC and the ISO's and RTO's.

Our electrical generation system and grid are changing very quickly, as these changes evolve we need to make sure these changes do not have unintended consequences. The rapid rise of natural gas electrical generation has proven to be a fantastic asset and something I will continue to support. However, as quickly as this resource develops, I'm afraid we are overlooking the potential downside associated with being too reliant on one fuel source. Especially a fuel that is dependent upon pipeline infrastructure that many states refuse to allow to be built.

In testimony on January 18th of this year, before the Senate Energy and Natural Resources Committee, Gordon van Welle, President and CEO of ISO New England stated, "we've known for several years that when it gets cold New England does not have sufficient natural gas supply

infrastructure to meet demand for both home heating and power generation". Now is the time for this administration to act.

There are three very good reasons to invoke emergency measures. America faces an immediate national security threat of a cyber-attack focused on our electric generation industry and energy delivery systems. Our coal and nuclear fleets provides the resource capacity cushion needed to mitigate a potential attack, and a secure fuel source in case a cyber threat is successful. Prematurely retiring these plants would be detrimental to our fuel security. This alone, is reason enough to invoke emergency measures. Second, the wholesale electricity markets are broken and have failed to mitigate the market distorting effects of tax subsidies and renewable fuel mandates implemented by states. Finally, it is the proper role of the Secretary of Energy to implement lawful policies to protect our grid and to protect the economic wellbeing of all Americans.

America faces a national security threat of a cyber-attack focused on our electric generation industry and energy delivery systems. Two years ago, our office hosted a cyber security seminar in Fairmont, WV. One industry expert who spoke was Joe McClelland who is FERC's cyber security expert. In subsequent meetings with my staff, Mr. McClelland discussed unclassified information about ongoing cyber-attacks on our pipelines.

Just last week an article outlines recent attacks on energy infrastructure. Additionally, "last month, investigators at the Department of Homeland Security and FBI warned energy companies of a year's long Russian hacking campaign that also targeted firms in the nuclear" industry. Pipeline compressor stations are prime targets. A successful attack on one compressor station can affect several natural gas power plants and grid reliability and resilience. Out of an abundance of caution, Secretary Perry should use 202c in *his judgment to best meet this immediate emergency and serve the public interest*. Prematurely retiring coal and nuclear plants would be detrimental to our fuel security needs.

In testimony before this committee we also heard from industry and government experts on the national security aspects of our nuclear power industry. A strong commercial nuclear industry is critical. Three nuclear industry components are intertwined with each other. The United States' nuclear weapons program, the Navy's nuclear propulsion program and reactors, and the nation's commercial nuclear industry. We heard from one witness who said, "The ability of the US to lead in nuclear safety, security and nonproliferation efforts is significantly lessened as commercial activity erodes".

Finally, in a March 2018 CRS Report on physical grid security, they state, "it has not necessarily reached the level of physical security needed based on the sector's own assessments of risk. Bulk power physical security remains a work in progress."

The wholesale electricity markets are broken and have failed to mitigate the market distorting effects of tax subsidies and renewable fuel mandates implemented by states. Dozens of witnesses have testified, hundreds of studies and millions of articles have been written about the market distorting features of our tax code. We have also heard from the ISO's and RTO's saying, "the markets are working", while ignoring the impact of these subsidies and tax policies have on the wholesale electricity market. It seems the only competition that is relevant in their minds is natural gas versus coal, the playing field is not level.

Just this week before our Committee FERC Chairman McIntyre said we do not have a free market and state policies have distorted pricing.

On a per-megawatt-hour basis, in FY 2013 solar received \$231 of support and wind received \$35, while natural gas and petroleum received 67 *cents* and coal received 57 *cents*, a factor of 405 times to one! And we are to believe this is a fair market? From a witness before this committee, *"Artificially promoting the development of wind and solar actually raises the true cost of electricity generation, because it is currently much cheaper to produce electricity (all things considered) through coal and natural gas plants, rather than new wind and solar"*.

PJM acknowledged the short comings of their market and the distorting effects of subsidies by filing with FERC a plan to properly compensate base load power generators for the value they provide to the market. "Left unaddressed the subsidies will crowd out efficient, competitive resources.... we seek the appropriate balance that respects state policy while avoiding policy impacts of a state's subsidies on the market as a whole and on other states."

Critics say that invoking 202c is a bailout for the coal industry. This is not correct. The reason coal is at an economic disadvantage is due to conscious policy decisions made by Congress and state legislatures around the country. These politicians have distorted the market to such an extent that secretary Perry correctly stated, "We don't have a free market in that industry and I'm not sure you want one." Temporarily invoking 202c will give the markets and regulators the time needed to correct their policy decisions. A policy where all fuel sources are treated fairly and valued for the security they bring is the outcome we seek.

It is the proper role of the Secretary of Energy and President Trump to implement lawful policies to protect our grid and to protect the economic wellbeing of all Americans. Congress also has a role in asking for policies to be implemented. In this regard, 23 members of Congress signed a bipartisan letter to President Trump asking that 202c be invoked. A second bipartisan letter with four additional members of the House "urge immediate action" by the President to keep Ohio's only two nuclear plants open.

In a time where it is the policy of this administration to achieve energy dominance, Americans had to worry about their lights staying on during the recent Cyclone Bomb weather event. In addition, American's had to import Russian LNG just to make sure they remained warm during a

relatively minor weather event. We were put into this situation by the shortsighted policies by New England politicians. What happens the next time?

In January of this year, ISO New England published a report detailing the crisis they face.

- *Fuel-security risk—the possibility that power plants won't have or be able to get the fuel they need to run, particularly in winter—is the foremost challenge to a reliable power grid in New England.*
- *The region is vulnerable to the season-long outage of any of several major energy facilities*

ISO-New England recently asked FERC to keep Exelon's Mystic Generating station online, saying their retirement could put electricity reliability at risk. The early retirement of units 8 and 9 at the plant would pose an "unacceptable fuel security risk to the region during the winter months," ISO-NE said in a memo. We cannot agree more. The same should be done nationwide.

The shortsighted renewable policies implemented by some states has led to 73 gigawatts of electricity being imported from Canada, equivalent of 70-120 power plants. Each of the power plants replaced by the Canadian power were an economic driver in their communities. Each plant provided essential tax revenue to support the local government and services. In my state, one such plant provides 30% of the local tax revenue. If this plant is closed due to unfair competition and bad policy decisions made on the national level, it will threaten hundreds of West Virginian's economic security.

Conclusion

I urge you to exercise the powers granted to you via section 202c for a temporary two-year period. This will allow the markets and policy makers the time needed to come up with a correct and fair solution addressing national security and past bad policy. Once we prematurely retire nuclear and coal fired plants we potentially put our economy in jeopardy. Once a plant closes it will not come back. A time out during this rapidly changing time, is a wise thing to do.

We have been warned about potential problems on the immediate horizon, but because of our polarizing politics our institutions have been unable to respond to the challenge. There were those who said the Titanic was unsinkable, experts after the fact said we were not creative enough to imagine 911, now we should not foolishly put our grid at risk. Please invoke 202c to help all Americans.

Sincerely,


David B. McKinley, P.E.
Member of Congress
DBM/lh